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I

BOSTON SCHOOL ADMINISTRATION[1]

This is a local issue only in the sense that General Hancock intended to express when he made the unfortunate remark that the tariff is a local issue. The Boston Department of Public Instruction is representative of the system of electing school boards by popular vote, and the assumption is not unwarranted, though based upon hearsay evidence, that the faults of the Boston system are not peculiar to Boston. It has been proclaimed, by at least one learned magazine, that the results obtained in the Boston public schools are lower than the actual scholarship of the masses of pupils in other cities, and I have met a number of prominent educators and educationists who are confident that the efficiency of public instruction in Boston is, at best, only comparative, and that the popular notion to the contrary is due to the slow-fading belief that Boston is still, as she unquestionably was many years ago, the center of American culture. The opinion, or assertion, as made in the *Forum*, that the Boston schools are very inferior is impugned by the superintendent of them (Mr. Seaver), and, I think, by each of the six supervisors; but, as I recall conversations I have had with them on many occasions, every one of the seven experts believes the Boston system of management to be very injurious in many respects, the duties of the school commit-

[1] Reprinted, by permission, from the Boston *Evening Transcript* of July 17, 1897.

tee being both legislative and executive, and so roughly molded that not only is there no line of demarcation between the educational and business departments, but (what is much more dangerous) the inexpert and heterogeneous committee is constantly assuming the most delicate functions of the expert body,—the board of supervisors,—over whose deliberations the superintendent presides, *ex-officio*. The best available opinion in Boston, then, is not consonant with the Boston system. The fact that it is an expressed opinion—even privately expressed—is the more striking when it is stated that these officers are chosen by the school committee for only a two years' term, and the slightest prejudice, perhaps accidentally and unknowingly created, might cause any one of them the loss of remunerative employment. The superintendent, as a member of the Committee of Fifteen, has openly declared against the large elective school committee, and I am inclined to think the document which the Committee of Fifteen put forth might have cost him several votes, and perhaps defeated him, had it become the practice of members of school committees to possess such publications, or in any way to find out, from time to time, what is going on in the educational world. I have not noticed, however, that the superintendent appeared before a legislative committee this winter to advocate, as he consistently and very unwisely might have done, the abolishment of the Boston School Committee, though the views he holds were probably quite as well expressed there by President Eliot of Harvard University. Even his appearance, however, would have been futile, though heroic, for the Republican legislators of Suffolk County, of which Boston is the seat, voted, before they heard the testimony at all, to reject the measure, it being deemed by them very bad politics to destroy the only official machine in Boston that they are sure of controlling. This control is vouchsafed them by about ten thousand women voters, whose motto is: "Put None but Protestants on Guard." This being more nearly compatible with Republican than with Democratic sentiment, the question of school management in Boston is

forced to a political basis at once. The Legislature is Republican; Boston is Democratic. Again, women are permitted to vote only for school committee, and to establish an appointive board is, therefore, to deprive them of their moiety of the highest privilege of citizenship.

But while the Boston outlook may not just now be bright, it has seemed to me that even a desultory recital of some of the observations of a "layman" during a three-year term in a school board might not be entirely without value—especially so, perhaps, because the inexpert educationist (if that term is permissible) who does not think he ought to exist is not very numerous, and is but seldom, if ever, heard from. I think I must have approached this public service a somewhat callow citizen, and emerged from it somewhat callously. At all events, I recall that I was about halfway through my term, which expired at the beginning of 1897, when I perceived that I could not consistently seek or accept a renomination. The feeling that I should be called upon to formulate a course of study for a primary class, or a Latin school, or a manual-training school, became oppressive when I realized that I was not what is called "equipped" for such service; nor did I hanker for the opportunity to designate what text-books should be used in the schools; a task which, in fact, amounts to nothing more than choosing between text-book publishing houses. It would seem as though even a political boss or a machine legislature could be made to understand that a lot of citizens chosen haphazard from the shop, the counting room, the bar, the pulpit, the household (for women serve, too), ought not to be required, and should not be permitted, to decide such questions for eighty thousand children—or for eighty children, for that matter. Of course it may be said that members of school committees are not obliged to perform these duties, or, at least, they may be wisely performed perfunctorily, by adopting the suggestions of the Board of Supervisors, which is supposed to be an advisory body. But, in my experience, this is just what a school committee will not do. It may, and often does, ask the supervisors to recommend a text-book, and to

report upon some purely educational question, such, for example, as the so-called enrichment of the grammar course, departmental work, and the adoption of parallel courses. But it does not follow that the expert's recommendation must be accepted, or is even likely to be. I have frequently seen such advice disregarded and sometimes spurned. The Boston committee is composed of twenty-four members (elected at large and eight retiring each year), and as the Massachusetts statute requires a two-thirds vote of the full board for the adoption of any text-book, a clever text-book agent, if he cannot get his own wares adopted, may at least prevent any other book from going on the authorized list. Results that would be ludicrous, if they were not so serious, naturally follow. I recall a number of facts which, while they all belong to one case, illustrate more than one of the points I am trying to make. During my second year in office it was discovered that much dissatisfaction was being expressed by employers of juvenile "help" because of the ill-formed, cramped, and illegible handwriting of graduates of the grammar schools. It was found, also, that Chicago and several other large cities, besides many smaller ones, both East and West, had adopted the vertical style of penmanship because it had been found that even the "hand" that was not good-looking had almost invariably the merit of being "plain." Hygienic questions were brought in, too, but these were somewhat abstruse, and subsequently the doctors in the Boston committee disagreed very learnedly upon them—as the lawyer members nearly always do on all debatable questions. The Boston board appointed a committee of five to inquire into the vertical system. This work was painstakingly and intelligently done, and the sub-committee's report, which became a public document, was unquestionably a meritorious, if a somewhat ambitious production. The introduction of the system, at least experimentally in a few schools, was recommended. The recommendation was adopted, after a hard fight, by a slender majority. Before the close of the session, when three of the yeas had retired, reconsideration was secured and the report of the sub-com-

mittee was rejected. The subject was then referred to the committee on examinations, which reported—only one member dissenting—in favor of the introduction of the system. This report was rejected, and the question was then referred to the Board of Supervisors, whither it should have gone in the first place. The experts made an exhaustive inquiry, summoning witnesses and corresponding with school authorities and other people far and near. At length they reported in favor of the vertical system. But even this report was rejected, almost contemptuously, and the superintendent was then directed by vote of the board to write to the grammar-school masters, asking them if they liked the vertical style and would be willing to try it in their classes. Several replied, expressing a willingness to experiment with the system, but most of the masters, in the words of the superintendent, "begged to be excused." So that the school committee finally stood, that year, in the position of going over the heads of its expert advisers to get the judgment of their subordinates in rank, and, withal, it was itself impotent in the end. But those masters who were willing to try the vertical system did try it, not finding anything in the rules and regulations of the department to prevent them, and by the next year, and when the annual text-book raid was almost due, it was found that the reform writing had got quite a hold. Then the committee actually passed an order which authorized and encouraged the new system. But the next step, the adoption of a text-book, was more difficult. The copy-book-makers waged a most desperate war, in which the members of the board soon became offensive partisans. Even the supervisors, who had recommended a book, were unmercifully assailed, and warned against exceeding their duties. They were to be seen and not heard, except when they were asked to speak. The result was the defeat of the copy books, sixteen votes not being secured, as required by statute. So that the school committee finally stood, that year, in the position of adopting a new style of writing, but refusing to furnish the necessary text-books for securing intelligent results on the part of the pupils; while the most

hurtful direct consequence is that the individual child is taught the vertical hand in one grade and the sloping hand in the next, or *vice versa*, for the whole subject now rests, through the impotence of the school committee, with the individual teachers, who are influenced by personal experience or practice, by prejudice or caprice. It is, perhaps, needless to add that the school committee was swept from its moorings (the Board of Supervisors) by the dazzling efforts, the almost hypnotic influences, of the publishing houses.

I never for a moment blamed the text-book men in this or any other instance. The board simply invites these ravenous invasions, which are annually made. Nor have I believed that the raiders find it congenial to traffic upon such predatory ground. The house that did not pursue such methods would certainly sell very few books in the Boston public schools. The selling agents care very little, I think, about the opinions, good or ill, of the Board of Supervisors, for they know that the school committee also cares very little about them. Just before the yearly attack there is a portentous calm. Few debates occur in the open board. There is a great deal of buttonholing in the corridors and the committee rooms at school headquarters. The text-book lobby is in full swing. Members whisper together and text-book men whisper to both. The text-book men follow the members to their offices and sometimes visit their homes, where much argument may be "pumped" into the individual who intends to be a spokesman on the floor in debate. I have found them very agreeable companions, for we have usually discussed school management freely, and text-books very reservedly. Before I had been long on the board I discovered that a good text-book man knew more about the public schools of Boston than the average member of the Boston committee, and I learned much from them about the conditions of the schools in New York, Brooklyn, Chicago, St. Louis, Cleveland, and a few other representative cities. I really did not need to hear their book arguments, for I knew I should hear them exactly reiterated in the school

committee. As a rule such debates were confined to a few members, certain of whom almost always spoke for one particular house, while other members followed the fortunes of another house. When the storm would break, at last, it always seemed as if there would never be any more sunshine in the Boston schools, and that the members of the board must be mortal enemies for life. As for the text-book men, one could imagine them trooping off with a crowd of seconds to some sylvan dell; but, quite to the contrary, I found them, early one morning in early summer last year, sitting and chatting together on the piazza of the Maplewood Hotel, watching, as they talked, the fleeting shadows of fleecy clouds as they chased up the great slopes of Mt. Washington and went into nothingness over the summit. I was glad to meet them again, for, after I had made it known that I would invariably vote to sustain the expert Board of Supervisors in text-book controversies, I missed them, and was very sorry. They had come to attend the annual meeting of the American Institute of Instruction, availing themselves of this opportunity to call the attention of teachers and educationists to their books and to secure written commendations where possible. I have found schoolmasters and even supervisors rather free in doing this sort of thing, and they, too, are not unlikely to " stand in " with one particular house through thick and thin. While I do not know that this is altogether wrong, I do know that I was embarrassed, and found my position with regard to expert advice made almost untenable, through the practice of supervisors themselves of launching text-books of their own upon the market through some favored houses, which promptly invited the school committee to put these books on the authorized list. I do not believe it possible to secure from a small, close body like this an absolutely fair, and certainly not an unquestionable, professional opinion on the value and applicability of a book produced by one of its own members. And this brings me back to the school committee itself, whose members, like the text-book men, soon see the shadows flee when the controversy is

closed. I have suspected log-rolling in some instances, but probably there was nothing in this, though I very distinctly recall a remark made in a sub-committee room one afternoon by a member toward whom reform associations are particularly tender. The memorable fight over Frye's *Geography* had taken place; the book had been defeated. The member (whose sex it would perhaps be unfair to state) was indignant and exclaimed: "If we can't have Frye's *Geography*, they shan't have Metcalf's *Grammar*." This was not said during the stress of battle, but several days after it. The books mentioned came from rival houses that have had a long struggle for supremacy in Boston, and the "we" and the "they" in that sentence of eleven words bespoke the position of the Boston School Committee on the whole textbook question.

This kind of mischief done or averted, the board soon settled down to the discussion of some other form of patronage. The teachership is still a spoil of office. It is more difficult, at the present time, for a Catholic than for a Protestant young woman to get a place, but, nevertheless, some Catholics secure appointments, for "trading" may always be done, while each side has a wholesome fear of the other assailing it in the open board. A member said one day, in my hearing: "I must have my quota of teachers in —— ——, anyhow." (The dashes represent the district in which he resides.) It turned out that he got at least a good part of what he demanded, and there was a remarkable sequel. One of the ablest masters in the service, an elderly, discreet man, said to me one day: "I don't know what I shall do with that Miss ——; she is thoroughly incompetent and a great injury to my school."

"It seems to me," I said, "you have only to make that statement to your division committee in charge."

"No, no," he replied, "it would never do. She was put in by Mr. ——, and if she were removed the A. P. A. cry would be raised, and that would do the whole school so much injury I had rather put up with a poor teacher."

This religious difficulty has a double-back-action. Some-

times the Catholic is kept out of her rights; at others the Protestant is wronged to give the Catholic a place. And there is no peace any more. Actual merit is one of the last things thought of, if it is ever thought of at all. It is true the candidate must have passed an examination, but the supply is always much greater than the demand, and written examination is necessarily inadequate as a test of fitness, because it does not bring out the quality known as teaching ability. If a poor teacher gets into the service, removal seems almost impossible, because it is the political factor which controls. The elective board has the "say." The superintendent and his supervisors are mere figureheads. Even an opinion is rarely asked of them in such matters as this. Transfers are made without their knowledge. Submasters are chosen and, in due time, promoted to masterships without it being even said to them: "What do you think of this?" The board at one time ordered a preferred list of sub-masters eligible for promotion to be made by the supervising body, but the very first time there was a vacancy it was found that the man with a "pull" was not on the list, and the list was therefore ignored. Subsequently, it was found to have been ignored so much the board gravely voted it out of existence. "Pull" and expediency stand for merit now. If a master and his sub-master are incompatible, the sub-master is given the first vacant mastership for harmony's sake. Sometimes, and not infrequently, a master is transferred, regardless of the good of the service, from one side of the city to another, in order to make a vacancy in a school where an influential sub-master desires a promotion. The advice of the superintendent, if it is given, has no weight in such cases. It is not even thought of, I feel sure, when the board proceeds to the business of making the changes. The most inefficient sub-master in the service to-day may be elected master to-morrow, for while the salaried educationists may prefer what is best, the non-professional committeemen will probably choose what is worst. There is often that very marked difference; personal advancement by mere choosing rather than by preferment. It has been suggested

that the remedy may lie in delegating to the superintendent and supervisors the power to promote; or, at least, the board could adopt a rule by which, in effect, it would agree neither to select nor promote any instructor not recommended by the advisory officers. I do not expect to see any school committee accept with honest intent any such proposal. At all events, it would not be worth what it would cost to put it into type, so long as the supervisors and superintendent are not made secure by long tenure of office. I served but three years on the board, and yet voted for these officers twice during my short term of service. Few men thus situated are so natured that they can spontaneously assert the exact truth, without ambiguity or evasion, when they know it to be unwelcome and likely, if fearlessly and too forcibly expounded, to render each of them *persona non grata* with the office-giving authority. If President McKinley should go to the custodian of the post-office building in New York and tell him he wished Mike Jones appointed a janitor's helper, it is not probable the custodian would waste much time looking up the "availability" of Mr. Jones for such a position. Of course, Mr. McKinley would not do this, but members of school committees find no office, however humble, unworthy of their personal attention. And it is not a stretch of imagination to foresee the school-board politician saying to the Board of Supervisors: "You are going to recommend Alf Wiggle for the mastership of the Charles Sumner School, or I'll know the reason why!" The more refined worker on the board will hint to the supervisors that Mr. Wiggle seems to be a person who would fill the vacant place satisfactorily. In the end the office-seekers, who are invariably the most energetic, would get their candidates in, or the supervisors would get out.

As the superintendent and the supervisors are unable to put the right people in, so, also, are they powerless to put the wrong people out. The service is crowded with confessedly incompetent instructors in nearly all grades. There are several masters in the Boston service who would not ornament or illuminate the old-time "deestrict skule" in the

Yankee back-lands. I do not base this statement upon personal observation, for I never claimed to be a judge of scholarship, nor did I understand that I was elected by the people for any such purpose. I base it upon answers given by different supervisors on different occasions to questions directed by me to them regarding the efficiency of masters in various schools about which more or less unfavorable comment had been made by intelligent parents. I may fairly add that personal contact with many masters resulted in some of the most delightful and elevating acquaintanceships I possess, while the uneducated educator has usually proved, in the classroom, to be a mere rude, turgid, obsolete bully in the midst of many half-terrified, half-dulled children, who reminded one of little crocuses struggling to unfold dainty flowers in frozen ground. That the percentum of inefficiency is by no means small is a fact very clearly recognized by Dr. Larkin Dunton, head master of the Boston Normal School, who made the following statement before a legislative committee last winter:

"Many teachers keep struggling on and teaching when they are sick and too old to render efficient service. Thousands of children in Boston to-day are under the care of such teachers, and are, consequently, robbed of their just right to an opportunity to make the most and the best of themselves. These are not rare and occasional cases; they are numerous and constant. The evil is so great as to demand an immediate remedy if we are to reach the full measure of good that ought to come from our system of public schools. It is easy enough to say that the remedy for all this is now in the hands of school committees, and that they already have authority to dismiss all incompetent teachers, whether rendered incompetent by sickness, old age, or any other means. This is true, but still the evil continues."

Dr. Dunton was outspoken on this occasion because he wanted the legislature to give the teachers of Boston the right to tax themselves in order to create a superannuation fund. Superintendent Seaver heartily seconded the movement for the reasons stated by Dr. Dunton, but active mem-

bers of the school committee appeared in opposition, and the measure was defeated.

For the purposes of school management Boston is separated into nine divisions, the affairs of each one of which are managed by a sub-committee of five members of the general board. The high and Latin schools are under the care of another sub-committee, the Normal School of another, and the Mechanic Arts High School of still another. The evening schools, the kindergartens, and the Horace Mann School are governed each by a separate committee. Instead of their being one school committee, there are, therefore, in effect, fifteen committees, each one having duties ranging from the signing of a requisition for a pane of glass to the nomination of a head master of a district where there may be several thousands of children. The city is again divided for musical instruction, which is under the charge of still another committee, with the result that a different system is taught in each district, and when the graduating classes are assembled each year in one great hall, the only tune they can sing together is "America," and there is even some doubt then whether it is a Christopher Colombo America or a Lief Ericsson America. One of the most important sub-committees is that having charge of the building of new schoolhouses and the repairs of old ones. While men of ability and irreproachable reputation serve on it, nevertheless they have but little time to give to the details, which are legion, and much of the work cannot be delegated; such, for example, as the search for schoolhouse sites. That the department, as a whole, is wastefully managed, even a cursory examination of the auditor's reports will show. Boston, with a quarter the population of New York, spends half as much money, and, I fear, with scarcely better results than the metropolis has secured in the past, for many children of school age are unaccommodated altogether, while thousands of others are crowded into inadequate spaces, often in ill-ventilated and unsanitary buildings that are crumbling with age. In all, there are thirty sub-committees of the Boston School Committee,

which means many divisions of responsibility and a consequent indifference of accountability, particularly in financial affairs. For example, the division committees easily fall into the practice of letting teachers off on leave of absence for the mere asking. Certificates of physicians are rarely called for, and an instructor may be absent a whole year on half-pay. Upon investigating this matter at one time, while a member, I found that, during that year, about ten per cent. of the whole teaching staff of Boston had been away on leave. Favored teachers are even permitted to go to other cities to teach for pay, while drawing half-pay in Boston.

In conclusion, I wish to say that I have arrayed here only such facts as I have personal knowledge of, and I do not think I need now explain that, even as a "layman," I am willing to accept a small, well-paid commission, whether appointed by the mayor or the governor (though, on home-rule principles, I believe it should be the former), rather than a large, unsalaried, elective school committee. While there are "able and discreet persons" on the Boston committee, persons who serve from only the highest and purest motives, the system seems incapable of producing anything better than it does produce.

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II

LINES OF GROWTH IN MATURING[1]

Pestalozzianism may be said to comprise three somewhat distinct, if not altogether new, factors in the teacher's conception of education: (1) That it is a process of development or unfolding, and only incidentally one of acquisition and possession; (2) that it is an ethical process, and means to socialize the individual to the end that all community relations shall be safer and more tender, and (3) that the primary means for initiating and furthering this evolution of the individual is the systematic study of things in the form of what has come to be known as object-lessons and teaching for the elementary grades, and laboratory science for the higher classes.

Of these three distinctive characteristics of the system the emphasis which it, himself and his associates included, put upon the individual development as above scholarship in education, is pronounced and vital; and places Pestalozzi high among the world's educational leaders. Clearly this was no discovery of Pestalozzi; *i. e.*, no exclusive discovery. Others had glimpsed the truth before, as others have done since; some of whom have but vague notions of either the personality of Pestalozzi or the Yverdun movement. But this forerunner of Froebel and modern teaching saw, as no others of his time saw, the force of the principle requiring immediate touch with things as a stimulus to learning, as a determining law of the school.

With Pestalozzi, this contact with nature, and the constant use of it, served as a stimulus, not as a store upon which to draw. They were made the means of developing or unfolding the child's powers, and were only

[1] An Address delivered before the National Educational Association, at Milwaukee, Wis., July 9, 1897.

incidentally of value in themselves. Development, maturing, was the end. The thought is common enough now; poorly comprehended by most teachers maybe, but neverthelss pervasive in a way, and reforming. Both the term and the idea haunt pedagogical literature. We say education is development and teach as if it were storage. Growth is exalted in precept; and, in practice, is crowded out of recognition by the supposed claims of the daily life and the dominance of the traditions of the well-informed.

Just what are the outward signs of an inward spiritual growth is not easily determined; perhaps it is indeterminate.

The modern emphasis put upon development as distinct from scholarship seems to be rather an intuition than distinct knowledge. It is held by faith, not followed by sight. It is easier to apprehend education as a process of unfolding, a true development, than to observe and comprehend its successive changes and discriminate its forms and stages.

That poet of nature and the human heart—Wordsworth—aptly and beautifully phrases the common thought in words not less pedagogical than poetic, as follows:

> "So build we up the being that we are:
> Thus deeply drinking in the soul of things
> We shall be wise perforce. . .
> . . . Whate'er we see,
> Whate'er we feel, by agency direct
> Or indirect, shall tend to feed and nurse
> Our faculties, shall fix in calmer seats
> Of moral strength, and raise to loftier heights
> Of love divine, our intellectual soul."

The interpretation of this is not hidden: we shall grow more wise; shall gain in steadiness of moral strength and rise to loftier heights in the exercise of divine love. But what are the steps in this growth toward wisdom which comes "perforce" to him who "drinks in the soul of things"? May the unread teacher, or any teacher, recognize the successive levels of "the intellectual soul"? This vision of details by the poet is not expected; but to the teacher, as

daily guide and lesson-hearer, it is obvious that ignorance of them may be fatal. Life appeared to Froebel to be a "progressive development from lower to higher grades of being." But what are these successive grades, here characterized as *lower* and *higher?* Elsewhere he defines this development as a "perpetual, uninterruptedly continuous, unseparated whole," always "rising from one stage to another."

But, more specifically he saw that, in addition to increase in bulk or quantity, the idea of development means "an increase in complexity of structure, an improvement in power, in skill, and in variety, in the performance of natural functions." Mr. Bowen, in his biographical commentary on Froebel, summarizes his teaching upon this point by saying that "increase in bulk will be represented by an increase in the amount of material retained in mind—in the memory; *development* will be a perfecting, so to speak, of the structure of the mind itself, an increase of insight into the connectedness of knowledge, an increase of power and skill and variety in dealing with knowledge, and in putting knowledge to all of its natural uses." Progress in the mass, and in the individual as well, has always been an advance toward clearer perceptions,—not necessarily more of them,—greater exactness, a more decided marking of limits, and the discarding more and more of what is extraneous. In the individual, education that is development "aims at producing clearness, quickness, and soundness of observation; a mind capable of retaining and readily recalling what it has learned, with power to combine and use what it knows; able to grasp the general ideas and principles which underlie particular cases, rapid and sagacious in drawing inferences, sound and wise in reasoning; full of interest and pride in its work, moved by a sense of what is good and true and beautiful; energetic, honest, strong in purpose, full of kindness." This is most admirable. It is comprehensive of the best things the growing mind covets. It is far removed from simple utility standards. Education on this plane means fullness of life. It is an excellent summary,—but at best an unclassified inventory, something like St. Paul's catalogue of the "fruits

of the spirit,"—suggestive and many-sided, but not typical. It affords a charming description, but is scarcely a guide. As a working programme it would be valueless.

My only contention is, without intending to be controversial or hypercritical, that the doctrine that education is development has the soundness of a creed, we believe in it, but it constitutes no working guide. The conviction, once universal, that education was scholarship was definite and might be followed. With this in mind, there was no doubt about courses of study, and the objects of education, and school methods. Theoretical pedagogy was simple and easily mastered. There was no need for a science of education. There was no science of education. The pedagogical creed had but one article, and teaching was an art.

But as the body of teachers came to think of and habitually to interpret education as a process of maturing or unfolding, realizing potential functions, and that exercise of faculty is the means of development, the work of the schools was greatly complicated. You will doubtless concede that in all ages and among all peoples the clearest insights of seers and prophets have discovered the same thing. This truth is believed to be more generally held to-day by teachers and mothers and interested guardians of children than ever before.

Education may be thought of in terms of its instrumentalities; in terms of its products; or in terms of the process involved. Most people are familiar with its first meaning. They think of it in terms of the apparatus, the furnishings and equipments of the school, for which they have paid or must pay money. It connects itself inseparably with teaching. If education be described as a process, it is far removed from their conception. If it be characterized as taking place naturally, wholly apart from the school, or enveloping and permeating and vitalizing the influences of the school, the idea, in the presence of many well-balanced adult minds, but untechnical and non-professional, becomes hazy and all but unintelligible. And yet this is, in substance, I take it, the modern conception of education, as a process of

maturing. Moreover, we hold the process to be germinative and not architectural; mind grows and unfolds, and is not constructed or built up.

Again, another large class of people, good people as the world goes, think of education in terms of mental or physical possession or attainment. Education means information, or better still, knowledge or scholarship. Knowing *many* things, one is educated; knowing *much*, in accepted groups of standard subjects, one is scholarly. To persons who are themselves possessed of abundant learning, he who has not mastered the traditional curriculums of the schools is, therefore, uneducated, whatever else he knows or can do. Faith in the virtues of rich scholastic attainments easily becomes restrictive, and the college-bred man is slow to concede that an equivalent training or efficiency is obtainable outside school halls.

To another it means skill, resourcefulness, adaptability, successful manipulation, effective execution. One's power to achieve results is the measure of his education. To be effective in public influence, successful in business, possessed of mechanical skill and ingenuity; to have pleased the public taste with well-written books; to paint, or carve, or do battle, or legislate with insight and wisdom; to explore, to discover or invent; are tangible marks of real education. What leaves these out cannot be real education. All else may be omitted, and the man still be educated.

In the judgment of a third class, of growing numbers, too, education connotes soundness of character, integrity of life and profession, honesty, purity of motive, intended and habitual straightforwardness. For the accomplishment of these are all tasks and exercises. He is well educated who has learned to be good, to live unselfishly, and to realize the common virtues in his daily walk.

Here are four somewhat distinct views of education. Three of them regard education as a result, as something to be possessed; and one the means or instruments employed for working out this result. But in the conception of education as development, these means and products are only

incidents or more or less certain accompaniments. The cardinal fact is the maturing process. It is this upon which current emphasis seems to be converging. Whatever may be the practice in the schoolroom, this seems to be the theory: that education is a change that takes place in mind, rather than any coveted result of such change.

Information, skill, discipline, character, are mental products. So are a genial temper, a chastened will, seriousness, sincerity, and patience. The teacher will have these things in mind in the process that is here called education. The conviction is all but universal that the process that does not result in giving some sort of needed power, or discipline, or skill, or other efficiency, is a waste of one's years. In most minds, education is connected with these qualities. They are the outward marks of an inward change. But the inward change is more fundamental than any specific power, or discipline, or skill, or efficiency. It ought not to need saying, perhaps does not, that it is of far less moment what a child knows than how and with what spirit he knows, the projective, forward-looking interest that masters him.

Gathering up the threads of what has been said in the preceding pages, mind would seem to grow or mature in the following distinct ways:

First: It is obvious that while an increase in the number of experiences may not be the highest form of mental growth, as it is not all, it constitutes one very important factor. Not only does the adult, if he be mentally grown or developed, have a larger store of judgments and insights, a greater aggregate of opinions, joys, pleasures, pains, satisfactions, and interests than the child; but for any given moment his experience seems to be richer. This cumulative tendency of the mind, thrifty and curious advance agent of the soul, lies at the foundation of all scholarship. No education is satisfactory that does not assure one of a reasonably large and definite accumulation of significant group facts. One difference of note between the two educations called the *new* and the *old* takes its rise here. The one said Learn facts, and the more of them the better. To the other,

facts are seen to have value for the mind only as they are type-facts—significant of a class. Froebel said to teachers, Plant "mother thoughts"—thoughts that multiply themselves into a line of descendants. A thing to be worth either teaching or learning is one that easily and naturally gathers other things about it and relates them to it. The one theory differs from the other, therefore, not in saying minify scholarship or neglect information; but in standing for the selection of such matter as may be called representative, centripetal, and organizing.

But education has to do with not only increasing the aggregate of experience, but with a growing complexity of the operations of the mind. Where there is a healthy process of maturing, remembrance gives place to, or is supplemented by, recollection; percepts by concepts; present and transient interests by distinct and vital ones. And the principle will be at once recognized as the subjective ground for a course of study, and the gradation of schools, the distribution of lesson matter, and the form and sequence of questions. It is a commonplace thought, but more far-reaching in its consequences and more conditioning as a principle of teaching than the young teacher is ready to allow. All the stages of life are upon successively higher planes; in this respect the law of the moral life being exactly the same as that of the intellectual life. We are all more or less prone to forget this, or else have never learned that, in the entire life of the child, the law of increasing complexity holds good. His pleasures and sorrows, his interest in nature and people, his occupations and games and leisure, his love of the beautiful, his fears and hates and standards of conduct, his sense of personal rights and unselfish interest in others—must be measured and interpreted by the same law of an increasing mastery over complex problems of mind and heart.

A third way in which the maturing of mind manifests itself is in the greater accuracy of its movements and the clearer definition of its images. Sharp, clear-cut discriminations, well-defined pleasures and satisfactions, unquestioned choices and purposes, distinct perceptions, a conscious and

intended bias of mind and heart—these belong to maturity, not to childhood. In the process of maturing all processes become better defined. There is a growing accuracy of mind, a definiteness and precision and positiveness of boundary in feelings and thoughts and motives. It is an entirely natural process, but may be greatly furthered by the school or by any wise direction. Hold the child responsible for all the accuracy of function and clearness of vision which his experience justifies. Be sure that his words are the legitimate prompting of his understanding. Keep him up to his best.

One of the most dangerous forms of leniency, the unkindest form of intended kindness, is that which allows a child to become addicted to uncouth and disorderly thinking upon any affairs. Dawdling means slow suicide for both mind and heart. Sharp, clear-cut, purposed living upon high planes is the ideal.

A fourth form of improvement in human maturing is in the increased control over one's actions and the relatively less of life that is given over to spontaneous or impulsive doing.

Either the power or the habit of deliberate action, as taking the place of haste; taking time to consider: planning, experimenting, adjusting means to ends in some intelligent way; all revision of experience in however simple form; restraining one's feelings or behavior to accomplish coveted personal ends; bearing disappointment and loss; honorable conduct in the presence of temptation to crookedness—as concrete cases may be, separately and collectively, unimportant in themselves; but as means of working out a rational self-mastery, or, what is better, as signs of control and a habit of considerateness already attained—such experiences are invaluable.

In a greater or less degree, every one of them may be found exemplified in the conduct of every normally maturing child in every grade throughout the school. The teacher is interested to know the fact, and to be able in a sure way to recognize the more or less visible signs of this growing

control. Her foresight must plan occasions for the exercise of the pupil's power of choice and self-guidance, and the realizing of preferences, and the purposed handling of instruments of expression; and, best of all, frequent opportunities for creative work. To grow in self-direction there must be frequent exercise of the power; purposed, continuous, and fitted to child-experience, always inviting to greater effort.

No system of education is worth much, whatever its other merits, that fails to do this in some degree for every child. To be dependent upon others, to be easily led, to show temper in trivial matters, to live in, and be satisfied with, the passing day, contradict whatever claims may be made for education. But this control, if it be real, touches all the life, and every instant. Every intellectual function, and bodily skill, the emotions, occupations, amusements, come gradually, and in time, under the law of purpose and intelligent direction—self-direction.

Among the several forms under which mental growth appears, none is more commonly recognized, or generally well understood, I suspect, than what may be termed facility —the ease with which the mind performs its accustomed acts, and the readiness with which it takes up with the new and the more difficult. One purpose of all training is to mechanize right doing of every sort. What once was done with effort only is now easily done. The purposed achievement that required attention is repeated or used unthinkingly, and well used. There is no loss of effectiveness, and there remains the power to make every unconscious, or automatic, action conscious and regulated as occasion demands. Promptness of judgment, quickness of perception, readiness in forming one's images, a facile recollection, cheerful sacrifices, generous unselfishness, spontaneous, hearty joy in one's pleasures are signs of a healthy maturity, as much to be coveted as it is unusual. These would seem to be legitimate aims to be kept before all classes by all teachers. No exercise of the intellect or the heart whose much repetition leaves it unfamiliar and difficult has done its perfect work. Voluntarily to choose an act as right and do it cheer-

fully shows a high degree of goodness. There is no virtue in the mere struggle to avoid being bad. If there be a struggle, the virtue consists in having ended it, once and for all, so that future rectitude is easy. Facility is to be coveted in every wholesome exercise.

In no respect does the educated adult differ more widely or more fundamentally from the untrained child than in the growing recognition of the moral quality in actions, and the disposition to regulate one's conduct in terms of its standards. To the child, few things are either right or wrong. Actions are merely indifferent. Soon, it is the majority of actions that are indifferent. Every day revises the classification. The line of division, for the average individual, gradually encroaches upon the group of indifferent actions, and naturally. The field of recognized moral interests enlarges. The moral quality is seen to inhere in an increasing number of one's experiences. What yesterday was regarded as purely impersonal and neutral presents itself to-day as having ethical bearings and involving responsibility. But recently the youth did unthinkingly and habitually what he comes to perform with misgivings or refrain from doing altogether. The moral sense is developing.

Primarily, the child—the young child—does as right what pleases himself; later, the standard is what pleases others, that is, some others—his parents or teachers, or others in authority over him. In time he comes to be guided by the real or supposed utilities in behavior; he regards as right those actions that pay; *i. e.*, that yield him some advantage, in a personal or social or economic way. In the beginning he values some present advantage, for which, upon occasion, he substitutes a distant, but more inviting good. Still further, in place of this standard of utility, he comes to regulate his conduct by the standards of those about him. Public opinion is his all-sufficient guide. He does as others do, and counts as safe what others approve. To this is added in time a recognition of some things as right and having authority because of the race's experience; their test in many lands at different times, their widespread use and

final approval. History, literature, art, invention, government, ethics, religion, industry, are full of such lessons.

These may be called the elementary stages in the process of moralizing life. Each stage has some advantage over the preceding. From doing as pleases one to have submitted to recognized authorities; to have replaced obedience to external control by a judgment from within; to be again corrected by the larger estimates of public opinion, and in time by the net results of the race's best insights—is a somewhat gradual but sure progression along an ascending scale. The child has gained at every step. More and more, life everywhere takes on the moral quality, and few indifferent actions remain. The field of responsibility has greatly extended; and if, along with the recognition of this universally moral aspect of the world, there goes a disposition to measure one's conduct by the revised standards, education would seem to be doing her perfect work.

Along with this moralizing of life, an incident of it, and re-enforcing it, is the process by which the individual is socialized. That is, one form of growth that belongs to education is the more intelligent consciousness of the individual that he is one of many, sharing common interests and mutual limitations. The child loves society, but is imperfectly fitted for living in it. Life, for him, is centripetal and exacting. Things, and other people, exist for him. They are meant to come his way and serve his want. He must learn, as he will learn, to be co-operative and self-forgetting. He comes to do for others as others have done for him; or rather, he comes to act with others for the common good. He sees the increasing richness of the life that accompanies this union with others, combining into institutions, and the more transient local organizations, and that can cheerfully, and does habitually, subordinate itself to the general welfare, and measures its privileges by its duties. Education that leaves out this form of improvement is growth in a partial and narrow sense only. It is insular and disintegrating.

The problem of school education is twofold. How to fit the individual for the largest and most fruitful inner and

personal life finds its complement in the question of how to introduce him to a high and conscious participation in the results of the race's culture, in the form of science, art, religion, ethics, philosophy, invention, the social police, and intellectual commerce. The process is a natural one. The schools can only help it on. But the schools cannot afford to be found not helping it on. To this end are made to contribute not only the games and concert of the little folk, but the lessons in history and story, the economic aspects of studies, the class constitution of the school, and whatever reasonable regulations grow out of the massing of children into groups and schools. No claim upon the teacher has more far-reaching consequences, for either the child or the community, than this—that instruction shall have in mind the increasingly complex social life he must live, and consider how best to fit every child for it.

Finally, the process of education as growth appears in what is well characterized as solidarity of mind. By a process of integration the many-colored manifold of one's experience is woven into one pattern. The lights and shadows of life—joy and sadness, fortune and misfortune—take their respective places in the general design. But it is one design. The tendency is to make the life one and organic. This is the ideal with the teacher for every child. In the perfected life, what the heart prompts and mind approves are one. Then an active memory shall no longer be a menace to the judgment. Precedent shall re-enforce the understanding. Duty and pleasure shall have become allies when the highest self-interest is found to coincide with the common good, and duty and privilege are seen to be equivalents.

This solidarity of mind is (1) and primarily, a massing of one's experiences; and (2) the converging and co-operation of one's powers, the whole mind functioning as a unit. The former calls for correlation of studies, that the act of instruction shall help on the tendency toward integration; the latter requires alertness and a rich and inviting environment.

Child-experience is multiform, but not manifold. One should rather speak of his experiences; education is to con-

vert them into experience. In childhood they are numerous, but shifting, without fixed connections, fluid. The process of maturing is a process of organizing these discrete experiences into an individual whole, giving it the quality of a body of knowledge.

Thinking and feeling, consciously in the adult, as spontaneously in the child, come, easily and surely, to find their issue in doing. They are no longer two functions, nor yet two sides of the same function; but rather two stages or orders of the mind's acting. In a like manner, understanding and expression, and purpose and expression, correspond and supplement each other. To wish my friend a good is to do him good to the extent of my ability. Experience tends to round itself out. Processes re-enforce each other. A reliable memory makes judgments safe. A controlled imagination expands the field of the understanding. Refined feelings make one sensitive to impressions and multiply perceptions. One's purposes are clearer and more positive, if grounded upon accurate knowledge, and given direction under the influence of an abiding interest. Motives are refined as life is broadened and the heart is touched.

By all of which discussion is meant simply that one aspect of education is this integration of experience, and the concert of faculties. Growth of mind appears in its increasing solidarity. It becomes more consistent with itself. Contradictions between precept and practice become less frequent. Learning and efficiency are more often found united; learning and virtue are seen to be of kin. Along with a sound mind in a sound body, is implied a pure heart as justifying both; and an education that does not aim to accomplish something of this for every child has not even begun aright. School education, not less than the preaching of the pulpit, must seek a wholeness of life that is the first atonement. Scrappiness of learning will not accomplish this. *Much* learning, in the sense of knowing many things, is deceptive and often cruel. What is learned without in some way being lived is vain or hindering. Culture, to

be a spiritual force, must permeate the whole life; so of goodness, a sense of the beautiful, one's habit of industry, the forms of courtesy. To be kind to one's equal, but not to one's servant; to be diligent in business and neglect one's home; to exalt the beautiful in dress and furnishing, and be indifferent to it in one's manner and habit; to be good when convenient or when it is easy, and to be cross in adversity—is neither courtesy, nor industry, nor refinement, nor goodness, but only their semblance. It is this identification of learning with life that must save education, if it be saved, from the charge and blight of formalism.

Besides an increase in the number of accurate mental pictures, and an increase in the accuracy, control, and facility of the mental process, and the mastery of successively more difficult and intricate operations, directed growth seeks the cultivation of a rich and constructive foresight and the two-fold process of moralizing and socializing the individual, to the end that the whole life be perfected and mankind be improved.

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III

CHILD-STUDY AND PSYCHOLOGY

Our estimate of the value of child-study for psychology will depend largely upon the degree of influence which Darwinism has come to exercise over our habits of thought. If we are strongly possessed by the Darwinian spirit of looking at things, we will, upon meeting anything developed and differentiated, almost involuntarily look for its explanation in something undeveloped and undifferentiated; and in doing this we seem to be fully satisfying our intellectual needs; for when we explain the developed thing by the undeveloped, are we not reducing a complicated fact to a simple fact, and thus changing troubled confusion into transparent clearness?

According to this mode of thinking, one may well be confident that the illuminating insight into the nature of mind will of necessity come from a study of the mind of the child, because here we can study mind at its very beginnings, before the troublesome complications found in the mature life have disturbed its early purity and simplicity. It does indeed seem that in the child the problem of mind is simpler and therefore easier of solution.

Weighty as these arguments undoubtedly are, I cannot but believe that the general position they represent is wrong; and to show that it is wrong, one need not take the problem of mind in a metaphysical sense. Hardly anyone would ever suppose that child-study would be of any particular advantage in approaching the metaphysical problem of mind, for of course the metaphysics of mind is just as difficult when we take mind at an early stage as when we take it at a higher stage of development. We certainly get no more light on the ultimate source and

destiny of mind when we look at the child than when we look at the adult.

But understanding by the problem of mind, or of psychology, the analysis and explanation of mental events, in the way that natural science analyzes and explains, I see many reasons for being glad that the mental life of the child has become an important field of work in psychology; at the same time, I believe we ought to expect from it only moderate light on the general problems of psychology. For, looked at from the widest view of psychological aims and methods, the child's mind is really more difficult to investigate than the adult mind, and must primarily need illumination from farther studies in our developed consciousness, rather than be the chief source of light on that developed consciousness. Upon certain special problems, as I will show later, studies of children can provide truly illuminating and explanatory materials which we must use if we are to solve these problems. But in general, if we wish to understand anything through and through, we must give our main attention to the most highly developed forms of it that we can find, for these will serve us much better than will the undeveloped forms. If we wish to know what art or literature really is, we must, above all things, go to mature art or mature literature. After we have thoroughly studied Italian and Greek art, we are perhaps prepared to see the meaning of the savage's or the child's rude scratches. But think of the futility of studying art from materials made up mainly of children's drawings and red men's paint! These materials would cast some light upon the general character of the art instinct; they show art in its undeveloped state, in the seed form; but, as I have just implied, one would know very little of art if he confined himself to these rude beginnings, whereas we could not say that his knowledge would be equally one-sided and meager if he left out the beginnings and confined himself to the developed art-products of southern Europe. A still wider and sounder knowledge would, of course, be gained by uniting both of these methods—by studying the highest

products also in their relation to the dawn of art. But what I wish to emphasize is that the different sides of the true and complete method are far from being of equal value. Much light comes upon the early stages of development from the later stages, while less light passes in the reverse direction. The higher forms have a kind of intelligibility of their own, while the lower forms have little meaning until we see what they are leading to; then, for the first time, their hidden potentialities become revealed.

Passing now from such generalities to the particular matter of psychology and child-study, I mean that this statement of the predominant fruitfulness of the study of highly developed forms holds with especial force in the realm of mind. For in these highly developed forms the different marks and possibilities of mind—its grain and fiber—come out most distinctly. It is a mistake to suppose that the child's mind displays a peculiar simplicity and purity of process. On the contrary, we find vagueness and obscurity there; we find that differences which in the mature mind come out in strong mutual contrast are faint or indiscernible in the child. But there is a still greater difficulty than this vague and elusive character of the child's processes; there is a difficulty of method, from which our study of the adult is comparatively free—I mean the difficulty of interpretation. The student of mind cannot directly observe the mental processes of the child, but must rely upon certain changes of the child's body, and upon the results of such changes—on movements of the arms, legs, eyes; changes of expression in the face; laughter, tears, sobs, etc., etc., and, later, articulate vocal utterance and products of the hand. The student must observe these and *interpret* them; must decide what mental processes they are the signs of. Here, of course, is a troublesome point; for the child itself cannot make scientific report of what his acts mean, and so we must do the best we can, in the absence of such evidence, to decide what these acts really stand for mentally; and, on the other hand, we must not be too sure that the absence of the bodily sign is proof that the mental process is not there. In

other words, we must always make allowance for possible processes in the child's mind which are not expressed in bodily changes marked and evident enough for us to observe them. The decision of these nice questions requires rare psychological learning and penetration; in fact, it seems to me that one must settle most of the knotty problems of psychology, in order to get the very tools and methods of carrying on such a study with assurance and accuracy; just as we have to settle some of the hardest questions of psychology before we can say what the movements of the protozoan or of certain insects—ants and bees, for instance—really mean. Until we have got an insight into the nature and interconnection of our mature processes, I do not see how the interpretation of children's behavior can be much more than slapdash, naïve dogmatism on the most complicated questions of general psychology.

And yet, if we are to aim at a complete psychology, we cannot afford to neglect the mind of the child. For psychology is the science of mind, not alone in this or that particular phase, but in all observable phases of its existence; and it is no excuse for neglecting an important field of its work to say that the field is a difficult one to cultivate, or that its results must always be subject to revision and correction in the light of general psychology. Psychology must include the study of mind at its low ebb, as well as at high tide; must take account of sleep, as well as waking; of hypnotism and insanity, as well as normal mental life; of dogs and ants, as well as men. Moreover, the study of children's thinking has already shown its right to exist, by giving results which are valuable for practical work with children, even though we admit that these results, when measured by the highest aims of psychology, offer no great light on fundamental questions of system.

It will be interesting, now, to glance at some of the broad problems in psychology on which child-study has a direct and important bearing, and then at those problems for which little or nothing can be expected from such a study. In the first place, there is the problem of the temporal order in

which certain secondary mental processes arise in the individual, and the farther problem of the circumstances of the rise of these processes. Such problems must, of course, be settled, if at all, after observing children; just as the order and circumstance of the appearance of these processes in the scale of creatures generally must be settled, if at all, after observing animals. I speak here only of what I call *secondary* processes, because there are, in my opinion, many mental processes which do not arrive one after another at all, but come all together. The very exercise of mind, even in its lowest stages, presupposes the presence of these fundamental activities, so that, as soon as one of them is there, the others are there, too. As examples of such activities, I would mention consciousness, sensibility, discrimination, combination; and, when we rightly understand what attention is, I believe, too, that attention will be included among those fundamental and ever-present processes which do not come straggling along serially into the mental life, but are all present as soon as there is any mental life whatsoever. Each implies and depends on the other processes, and if any one of them has not arrived, the others cannot arrive; or, to express the facts more exactly, they are each a different abstract view of one and the same concrete process of consciousness, and cannot exist alone any more than any other abstraction—pure surface, for example, without volume; or intensity of sensation, without any quality—can exist alone. An instructive parallel could be pointed at in biology, where, even in the mere unicellular creature, we find the whole store of vital processes—expansion, contraction, digestion, assimilation, excretion, respiration, circulation, reproduction—all of these going on together, and not arriving one after another; for each is nothing without the others. The biologists have come to see that these processes are abstract sides of the one concrete vital process. But psychology seems fated to remain in bondage to abstractions for some time yet; viewing them and talking of them as if they were real concrete processes, capable of going on whether something else is there or not.

But to return to our secondary mental processes,—such as recognition, recollection, imitation, and religious feeling, —a study of the time and circumstances of their occurrence and variation in the child is not merely of pedagogical importance, but is of real psychological importance. For while the mind of the adult is really the main source of our insight into the mind of the child, yet the mind of the child must undoubtedly be a very important point of departure in studying the mental phenomena of savage and of animal life; just as vertebrate embryology casts most important light on the structural development of invertebrate forms. For biology has already made it apparent that the individual, in growing up, epitomizes in many respects the evolution of the organic world. That a method of investigation analogous to this biological one can be used in psychology is shown by Professor Baldwin's recent work,[1] in which observations of children are brought to bear on the general genetic problem.

This general genetic problem in psychology is, it seems to me, the field where child-study can contribute most. But in regard to a host of problems in analytic and experimental psychology, it will be a matter of surprise if important gains come from such a study. On such problems as, for instance, Whether we have special sensations properly to be designated as sensations of change; What effect difference in the direction of attention has on the length of reaction-time; Whether upright vision requires an inversion of the retinal image; Whether emotion is made up solely of bodily sensations; Whether judgment is identical with association of subject and predicate—on such problems we would get no decisive answer by studying children until doomsday; for, in coming to the study of children, we have to give up the method of psychological study which is indispensable in approaching the questions just mentioned, and which has proved itself to be the basis and mainstay of all other

[1] Baldwin, *Mental development in the child and the race*, New York, 1896. Also his "Genetic studies" in the *Princeton contributions to psychology*, vol. i., Princeton, 1896.

methods whatever—I mean the method of self-observation. Now, in the examples I have just given (and an indefinite number of similar problems could be named), self-observation is necessary, either to introduce certain definite conditions into the experiment, or to observe the results of an experiment, or to make an analysis of some mental process; and in all such cases, child-study, whether by simple observation or by experiment, is of no avail. In other cases where the conditions are not of this kind, children may be used; but even here self-observation is a requisite for interpreting the results; and, therefore, child-study, just like brain-anatomy and physiology, and like anthropological and zoölogical contributions to psychology, must go hand-in-hand with self-observational psychology of the adult mind, if it is to give results of real value for psychology. Otherwise, some other method than that which alone has been found trustworthy is raised to the chief place, and the facts obtained are interpreted to mean something which psychologists cannot possibly admit. The great German neurologist Flechsig will serve as an illustration of what the outcome is when the methods of psychology are turned topsy-turvy. His recent brilliant discoveries[2] in regard to the development of the brain of the child are by him given a psychological interpretation which a true psychological method shows they cannot possibly have; and similar errors can readily occur in psychological studies of animals, savages, or children, when such studies are not carried on with all the light and correction which come from a profound general psychology.

Child-study will, I am sure, suffer exceedingly if it comes to be regarded as a relatively independent science, having only the loosest connection with general psychology, and following its own ways, as if it could afford to set up in business for itself. It is almost certain, in such a case, to get a false idea of the mind of the child, by neglect-

[2] Flechsig, *Gehirn und Seele*, Leipzig, 1896. See also his "Ueber die Associationscentren des menschlichen Gehirns," p. 49 *et seq.* of the *Berichte über den III internationalen Congress für Psychologie*, Munich, 1897.

ing the chief source of light—the study of the mature mind. As I have said before, if the alternative were forced upon us of learning the nature of the child by studying the child by itself merely, or by a thorough study of mind in all phases except that of the child, I would say by all means choose the latter; get your knowledge of the child by knowing as much as you can of the man. But luckily the alternative is not forced upon us. We can study both the child and the man, and in this way correct and supplement each imperfect study. If child-study lives thus as a vital part of a thoroughgoing general psychology, adapting the general methods of the most critical psychology to its own uses, and making the aim of general psychology its own aim, then it will lead to much that is both new and important. It will itself be a richer study, and psychology will be a richer science.

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IV

PHYSICS AS A REQUIREMENT FOR ADMISSION TO COLLEGE[1]

I am to speak to you upon the topic of physics as a requirement for admission to college. First, do we want it? Second, can we have it? Third, in what form shall we have it, if at all?

Much of what I have to say may appear trite and needless to some, but, if it does appear so, I will ask them to bear in mind what happened, or rather what did not happen, at the so-called Columbia Conferences held a little more than a year ago. President Low summoned representatives from a number of the leading colleges and secondary schools of the East, to confer upon the matter of requirements for admission from schools to colleges. There was a conference for Greek, a conference for Latin, one for German, for French, for history, for mathematics. There was no conference, no invitation to conference, upon any observational science. Agreement upon a requirement in such a science was a matter too hopeless, even for discussion. This state of things in the East, and I am by no means sure they are very much better in the West, gives ample reason for such remarks as I have now to make.

The present age is, beyond all ages that have preceded it, objective in its methods. Even psychology has become an objective science, studied in laboratories with ingenious mechanical apparatus. After centuries of self-communion mankind has opened its eyes to discover, to rediscover, the outer world and to enter into a new life, which in activity and in progress excels the old life as the day excels the night. Into this new life it is the duty of our

[1] A paper read before the Department of Natural Science Instruction of the National Educational Association, at Milwaukee, Wis., July 7, 1897.

colleges and universities to enter, with their might; to make its activity more fruitful and its progress more sure, and still more, to find and keep, out of the abundant utilitarian harvest that already lies before us, that finer fruit which is the nourishment of the spirit, and which it is the duty of true scholarship to find and keep in every field of human labor.

And the higher institutions of learning are not unmindful of this high duty. There is not a college in the country worthy of the name that is not giving, or actively preparing to give, to its undergraduates instruction in several of the observational sciences. The battle in that part of the field is won; yet much remains. No man liveth to himself, and no university liveth to itself. There must be between the colleges and the schools good understanding, co-ordination, mutual helpfulness. As the fathers of our republic, discovering and molding public opinion and desire, built up out of heterogeneous and sometimes discordant political elements the great fabric of our government, so must we, as earnest, far-seeing, patriotic men build up out of the varied educational elements of the country, high and low, good, bad, and indifferent, a great national system of education—sound teaching in the public schools leading up by many avenues to the broader opportunities of the universities. "It would be a pity," said President Eliot[2]—speaking, not long ago, before the Harvard Faculty of Arts and Sciences—"it would be a pity, if we could not adapt our courses in college to any *good* teaching done in the schools." In that one sentence is set forth the duty of both parties in this great business; the duty of the schools to make their teaching good; the duty of the colleges to recognize and build upon such teaching.

But what are the observational sciences which can be made the ground of good teaching in the schools; teaching broad enough, and deep enough, and sound enough to merit specific notice in requirements for admission to college? Astronomy, botany, chemistry, meteorology, physiology, physiography, physics, and zoölogy have been proposed.

[2] This quotation may not be verbally accurate.

Among all these I believe physics to be, on the whole, the best and the most practicable. It is more fundamental and elementary than any of the others save, possibly, chemistry. It offers a greater variety of definite everyday topics of interest than any of the others save, possibly, chemistry. Moreover, it can be treated from first to last by quantitative as well as by qualitative methods, which gives it a distinct advantage over most of the other sciences, chemistry included. I am well aware that the quantitative side of science-teaching can be dwelt upon too much, or, rather, too exclusively, but the danger on that side is far less than on the other. Good science-teaching, and all other good teaching, no doubt, must throw the individual pupils upon their own resources. Now it has long seemed to me that the teacher who attempts to lay out in physics, or in any other science, individual observational work which is not mainly quantitative has before him a task of enormous difficulty. Qualitative facts are apt to be very obvious or very obscure. A stone falls to the ground; everybody knows that. Why does the stone fall to the ground? Nobody knows that. How fast—under what quantitative law—does the stone fall? That is the kind of question we can take up in the laboratory with the least likelihood of wasting time and effort, although this particular question I hold to be rather too difficult for experimental treatment in ordinary schools. Of course, not all scientific work can be quantitative. Not all of the best scientific work can be quantitative. But all of the best scientific work in any broad sense is characterized by a certain clearness of sight and rigor of logic which is, in my opinion, best inculcated in young minds by quantitative work. Such work is for the young student of science what the "setting-up drill" is to the young soldier. It gives him an abiding sense of professional form.

I am much interested in propositions to recognize botany and zoölogy as requirements for admission to college, and I am glad that we are to have discussions of these sciences as school studies. I hope, however, that I shall be forgiven if

I now express the opinion that botany and zoölogy, if they are to be accepted as requirements for admission to college, should, as a rule, be preceded or accompanied by the laboratory study of physics. I do not mean to imply that a boy or a girl must have had a formal course in physics before beginning the conscious observation of plants and animals. On the contrary, I believe that such observation should be encouraged and taught very early—in the primary-school stage, or earlier still. It is precisely because such work is within the capacity of young children that I would not have it required for admission to college. It should be assumed, not required. I should hardly venture to speak so freely upon this matter if I did not feel myself to be in accord with distinguished representatives of the very sciences to which I have alluded. For example, botany was tried as an admission subject for Harvard college fifteen or twenty years ago. It was the ordinary, descriptive, "systematic"[2] study familiar to the schools. It was given up as unsatisfactory after some years of trial, and one of the most difficult tasks an educational reformer can set for himself to-day is to convince the botany and zoölogy professors of Harvard University that anything worth recognizing can be done by the schools in their departments. There is one prominent educational institution in the East, perhaps more than one, that now has botany as a requirement for admission. It is apparently about the same kind of requirement that Harvard used to have. I am not informed whether the authorities of the Sheffield Scientific School, the institution I have in mind, are satisfied with this requirement, which is a comparatively recent one with them, but I have heard a number of teachers mention the school study induced by it, and none of them favorably. I hope to see all the natural-history sciences, including physiology, recognized as requirements for admission to college, provided they can be put by the schools upon such a level as to presuppose a good training in elementary physics, and perhaps chemistry. As to meteorology, astronomy, and physiography, I find the pre-

[2] Gray's *How Plants Grow*, with analysis of simple specimens.

vailing opinion among my colleagues at Harvard to be that the first-named should not be taken up without physics, but that the two latter may be. I shall not enlarge upon or belittle the merits of astronomy and physiography as studies for young people. Their interest and their importance are self-evident. But these are largely out-of-door studies, and as such they are very heavily handicapped in competition with other sciences for a place in schools. Chemistry is, in my opinion, the only formidable rival to physics as a science requirement for admission to college, but yet among my colleagues at Harvard I find in the department of chemistry a very strong preponderance of opinion in favor of physics, rather than chemistry, for admission. If I do not quote the opinion of men in other colleges, it is merely because I am not so well informed as to that opinion.

But there are difficulties, obstacles on the college side and on the school side. College faculties are generally controlled by men of middle age, and I have observed among such men a certain lack of enthusiasm, to speak within bounds, for the labor of revising requirements for admission, framing new requirements, investigating school conditions, and laying out courses of study to fit those conditions. This disinclination does not argue old-fogyism or lack of energy; it is rather characteristic of men active and eminent in their profession. They are doing their work in their own way—with approved courses—with an approved sequence of courses. Their years are fruitful, and they dread the loss of time which novel undertakings would entail. We must not look to them for help. We must look to young men for new labors. Even young men picking up this elementary labor may feel that they are sacrificing something—ambition for research, perhaps. And so they may be for the moment, but young men are made for such sacrifices; they thrive on them. Let them take up and carry through the work of co-ordinating the colleges and schools, to the great good of both; and twenty-five years hence, when some other great new work is to be done, it will be their turn to hold back and to declare themselves satisfied with the world just as it is.

On the school side, too, there are conservatism and established routine. School principals in the East are not usually teachers of natural science. They are rather likely to be teachers of the classics, and though I do not find such teachers as a rule unfriendly to physics, after this study is established upon a laboratory basis in their schools, I think they are sometimes slow to see the possibility of altering the school programme in such a way as to make room for any new study demanding much time. And the laboratory teaching of physics does demand much time, especially in the school programme. That fact must be resolutely faced at once. It is, in my opinion, the most serious obstacle to the general adoption of such a course. Some former difficulties have now disappeared. Once the expense for apparatus seemed prohibitive, but fairly good apparatus is now to be had for a very low price. Formerly there was a lack of suitable text-books. Now every month announces a new book, each better than all before it, and the only difficulty of the teacher is to make up his mind which of all these books he will use. Formerly there was a dearth of competent teachers. Now this dearth is less. With all these improvements in the situation, however, there remains the difficulty—the impossibility—of doing good laboratory work in very large class sections. I still think, as I thought ten years ago, that for the best results among young pupils, the laboratory sections should not be larger than twelve. The suggestion has been made that the more advanced pupils in the school may fitly be employed as laboratory assistants to look after the work of the less advanced, but to this proposition I cannot give my assent. I have too high an opinion of the difficulty and importance of laboratory teaching to be willing to intrust it to boys. Boy assistants may, however, lighten the mechanical labor of arranging and caring for apparatus, and this, in a large school, is no inconsiderable service. Would that I might find some way of impressing upon school principals, and school boards, the folly of burdening a science teacher with that kind of work which can be done better by mechanics

or by intelligent janitors. It is by giving every mechanical aid and relief to the teacher, and by this alone, that laboratory physics can be made practicable, in the best sense, in large schools.

However great the difficulties of our problem are on the school side, and I would not belittle these difficulties, they can be overcome if public sentiment demands the work, and in the forming of public sentiment upon such a question the influence of college requirements is tremendous. Whatever may be said in criticism of the requirements in experimental physics for admission to Harvard College, as they have been maintained for the past ten years, no one who has been familiar with the matter will deny that they have been the chief factor in revolutionizing the school teaching of physics throughout New England, and what Harvard has done there, other colleges have done, or can do, elsewhere.

The third question which I proposed at the outset has been touched upon more than once in what I have already said, but a fuller statement of what my answer to this question would be is found in the following definition and description, recently adopted by the Harvard Faculty of Arts and Sciences.

DEFINITION OF THE REQUIREMENTS IN ELEMENTARY PHYSICS FOR ADMISSION TO HARVARD COLLEGE AND THE LAWRENCE SCIENTIFIC SCHOOL.

A course of study dealing with the leading elementary facts and principles of physics, with quantitative laboratory work by the pupil.

The instruction given in this course should include qualitative lecture-room experiments, and should direct especial attention to the illustrations and applications of physical laws to be found in everyday life. The candidate will be required to pass a written examination, the main object of which will be to determine how much he has profited by such instruction. This examination may include numerical problems. It will contain more questions than any one candidate is expected to answer, in order to make allowance for a considerable diversity of instruction in different schools.

The pupil's laboratory work should give practice in the observation and explanation of physical phenomena, some familiarity with methods of measurement, and some training of the hand and the eye in the direction of precision and skill. It should also be regarded as a means of fixing in the mind of the pupil a considerable variety of facts and principles. The candidate

will be required to pass a laboratory examination, the main object of which will be to determine how much he has profited by such a laboratory course.

The candidate must name as the basis for his laboratory examination at least thirty-five exercises selected from a list of about sixty described in a publication issued by the University under the title, *Descriptive list of elementary exercises in physics.* In this list the divisions are mechanics (including hydrostatics), light, heat, sound, and electricity (with magnetism). At least ten of the exercises selected must be in mechanics. Any one of the four other divisions may be omitted altogether, but each of the three remaining divisions must be represented by at least three exercises.

The candidate will be required to present a notebook in which he has recorded the steps and the results of his laboratory exercises, and this notebook must bear the indorsement of his teacher, certifying that the notes are a true record of the pupil's work. It should contain an index of the exercises which it describes. These exercises need not be the same as those upon which the candidate presents himself for the laboratory examination, but should be equivalent to the latter in amount and grade of quantitative work.

The notebook is required as proof that the candidate has formed the habit of keeping a full and intelligible record of laboratory work through an extended course of experiments, and that his work has been of such a character as to raise a presumption in favor of his preparation for the examination. But much greater weight will be given to the laboratory examination than to the notebook in determining the candidate's attainments in physics. Experience has shown that pupils can make the original record of their observations entirely presentable, so that copying will be unnecessary, and they should in general be required to do so.

This course, if taken in the last year of the candidate's preparation, is expected to occupy in laboratory work, recitations, and lectures, five of the ordinary school periods, about fifty minutes in length, per week for the whole year. With a few exceptions, exercises like those in the *Descriptive list* already mentioned can be performed in a single school period, but for satisfactory results it will often be necessary to repeat an exercise. Two periods per week for the year should be sufficient for the laboratory work proper. If the course is begun much earlier than the last year of the candidate's preparation, as it well may be, it will require more time.

Those who are familiar with the old requirement, which this is intended to replace, will observe in the new statement, as compared with the old one, the following points of interest:

First: Some reduction of the individual laboratory work, in order to give opportunity for more attention to illustrations and applications of physical laws outside the laboratory.

Second: A recognition of the fact that laboratory note-

books brought from a preparatory school are usually characteristic of the school rather than of the individual candidates. (Frequently two or more pupils work jointly in the laboratory. Their notebooks will be strikingly alike, but a laboratory examination will show a great difference between the candidates when they apply for admission to college.)

Third: An effort to encourage the study of physics at an earlier stage of the preparation than is now customary for that study. (This purpose appears in the last paragraph of the description, which recognizes the length of the ordinary recitation period of the schools, and suggests that the physics work, which is now commonly done in the last year of the candidate's preparation, may well be begun "much earlier." The arrangement and length of the exercises in the revised *Descriptive list*, soon to be issued by the University, will make this purpose still more apparent.)

Most of what precedes was delivered before the Department of Natural Science Institution at the recent meeting of the National Educational Association in Milwaukee. Discussion there indicated something like what follows as the favorite arrangement of natural-science studies in the high schools of the West:

First year: "General science" and botany.

Second year: Zoölogy and physiology.

Third year: Physics.

Fourth year: Chemistry.

Now I believe that college teachers of biology would, as a rule, disapprove the recognition of the first two years of this science programme as preparation for admission to college; as a partial substitute for Greek or Latin, for example. What, then, is to be done? Shall we admit, once for all, that the better classes of high schools cannot be expected to prepare boys for the more exacting colleges? That is the answer of some, of many; but I am not willing to take it as the final answer of the public. Why cannot the order of the science studies be changed? I believe that physics can be taught—taught definitely, continuously, profitably—in the

first years of a high-school course. I believe that it can be as well taught in those years as Latin or Greek.

But many will say: We must wait for the mathematics, for geometry and algebra, before we take up physics. How much geometry? The relation of square of hypothenuse to square of base and altitude in the right triangle and a few simple facts concerning similar triangles. In addition, the relation of radius to circumference and to area in a circle. How much algebra? The ability to state and solve very simple equations with one unknown quantity. Must we put off physics to the third year on this account? I know that teachers value physics as a means of showing pupils the use of algebra. Will not the mathematics of the first two years go better and faster with physics as a running mate?

Suppose physics to be studied throughout the first two years of a high-school course, not necessarily with *daily* exercises, followed by chemistry in the third year, and, in the fourth year by some two studies chosen from the following list: astronomy, botany, physiology, physiography, zoölogy, etc. Would not this arrangement give a reasonable, even a rich, variety of scientific study, and would it not be possible to keep all of this study on a level with the linguistic study which it seeks in some measure to replace in requirements for admission to college?

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V

TESTS FOR DEFECTIVE VISION IN SCHOOL CHILDREN

It is assumed that the readers of the EDUCATIONAL REVIEW need no argument to convince them of the presence in our public schools of much detected and undetected eye disease, militating against the obtaining of a desirable education by scholars and the imparting of such an education by teachers. Instances of students who, through myopia or other ocular diseases, are unable to see reasonable distances, and who by glasses or other treatment find such obstacles removed; or of others, who, through hypermetropia or astigmatism, find themselves disinclined to study, owing to an overtaxed muscle of accommodation, with consequent asthenopia, or eye-tire, headache, etc., and who by suitably adjusted glasses are enabled to study with pleasure and comfort, are of sufficient frequency to have deeply impressed every individual engaged in educational work.

It is also assumed that the readers of the REVIEW understand the significance of the term myopia (near-sight), or an elongated optical axis, with a lack of distinct retinal focusing, requiring a concave glass to correct; of hypermetropia (sometimes erroneously called far-sight), or a shortened optical axis, in which clear vision is only obtained by an overtaxed muscle of acommodation, requiring a convex glass to correct; of astigmatism, or a cylindrically instead of a spherically shaped cornea, which produces more than one optical axis, thus developing visual confusion, and overtaxation of the muscle of accommodation, in its endeavor to harmonize and blend the plurality of axes—a condition requiring a cylindrical glass to correct; and of asthenopia, whose composite significance is eye-tire, print-blurring, headache, etc., produced by an overtaxed muscle of

accommodation, in its efforts to neutralize refractive errors by forcibly regulating the convexity of the lens of the eye.

It is further assumed that its readers understand the importance of the proper erection of school buildings, with reference to light, and its direction; the necessity of abundant artificial illumination and its quality; the proper construction of desks with regard to the child's size and position; the necessity for frequent change of occupation during school hours, and many other important questions bearing on circumstances calculated to affect the ocular health of students.

What is of particular interest to teachers in this instance is the detection of existing ocular diseases and the adoption of means calculated to bring relief. Is there a method easy to use, reasonably accurate in character, applicable to all cities, large and small, accessible to the masses, and imposing upon them no hardship? To this question an affirmative answer is unhesitatingly given, and it will be the writer's privilege in this article to describe a plan, the outlines of which have already been sketched in a little book, written by himself for teachers, entitled, *The eye and its care.*[1]

Between two and three years ago I submitted to the Minnesota Academy of Medicine a paper entitled "Refraction in schools," proposing a procedure for the easy detection of most ocular diseases by principals, through which students might be placed upon a path leading toward relief, which impressed the Academy so favorably as to induce it to forward to the Minneapolis Board of Education a petition for its formal adoption.

The Board at that time, for reasons probably satisfactory to itself, practically tabled the resolution. Last January, after the election of a new board of education, and the indorsement of the plan by Superintendent C. M. Jordan, together with a renewed suggestion from the Academy, the method was promptly adopted, and the writer appointed as its superintendent.

[1] Philadelphia: Lippincott & Co., 1896.

Meanwhile the University of Minnesota, at the suggestion of Professors Kiehle and Gale, placed the method in active and successful operation; and, at the request of Professor Kiehle, the writer has for two years conducted lectures and clinics upon the subject before the University Summer School and the classes in pedagogy, resulting in its satisfactory adoption in many Minnesota cities. Drs. Harlan and Wood of Baltimore used the method in a somewhat modified form in the public schools of that city a year or more ago, with the utmost satisfaction.

Immediately after the writer's appointment as board of education oculist, active operations were begun, and in a short time 25,696 children had been examined, by our efficient and interested school principals. One hundred dollars was allowed for expenses, which has more than covered the expenditures, as only some test-types and printed matter are necessary, copies of which are here given.

MINNEAPOLIS PUBLIC SCHOOLS.

MINNEAPOLIS, MINN., 189

Dear Sir:

Your child's eyes have been examined by me this day. I believe it advisable to consult an *Eye-Doctor* of recognized standing, and if you feel unable to consult one at his office, a Dispensary will do the work free of charge.

Respectfully,

Principal School.

Upon the back of this card should be printed the names, location, and office hours of the different free dispensaries.

A plain lecture was delivered to the principals descriptive of ocular anatomy, physiology, and refraction, with its errors, including myopia, hypermetropia, and astigmatism. This was supplemented by a clinic, or practical demonstration of the method on some fifty pupils furnished by Superintendent Jordan, during which the writer first made his test, distributed cards, and filled in the statistical papers himself, and then requested many of the principals to do the same under his instruction. Test-cards and printed matter were then distributed to the principals, and they were re-

MINNEAPOLIS PUBLIC SCHOOLS.

EYE EXAMINATIONS.

....*School.* *Date* .. ..*189*..

Principal..... .. .. *Examiner*.....

Entire number of Pupils examined..... *Number advised to consult an Oculist* . .....

INSTRUCTIONS FOR EYE EXAMINATIONS.

The examination should be made privately and singly, in a room apart from the general school session.

Ascertain if the pupil habitually suffers from inflamed lids or eyes.

Children already wearing glasses should be tested with such glasses properly adjusted on the face.

Place a card of Snellen's Test-Types on the wall in good light; do not allow the face of the card to be covered by glass.

The line marked XX (20) should be seen at twenty feet, therefore place the pupil twenty feet from the card.

Each eye should be examined separately.

Hold a card over one eye while the other is being examined. Do not press upon the covered eye, as the pressure might induce an incorrect examination.

Have the pupil begin at the top of the test card, and read aloud down as far as he can, first with one eye and then with the other.

If the pupil does not habitually suffer from inflamed lids or eyes, and can read a *majority* of the XX (20) test type with *each* eye and does not, upon inquiry, complain of *habitually* tired and painful eyes or headache after study, his eyes may be considered satisfactory; but if he habitually suffers from inflamed lids or eyes, or cannot read a *majority* of the XX (20) test type with *both* eyes, or *habitually* complains of tired and painful eyes or headache after study, a card of information should be sent to the parent or guardian.

Please examine your entire school by this method, but only such pupils as are thought necessary to send to an oculist need tabulation in this blank.

May 1 of each year please complete this report and send it to Dr. C. M. Jordan, superintendent of schools, and a duplicate to the Board oculist, Dr. Frank Allport, 602 Nicollet Avenue, Minneapolis, Minn.

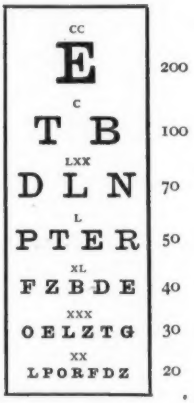
This will afford you opportunity to examine your pupils, to note if they follow your suggestion with regard to consulting an oculist, and, if so, to observe the effect upon the pupil's conduct, health, application to study, etc., etc., which you will please carefully, but briefly, note in the proper place in this sheet.

First-grade children need not be examined.

No.	NAME.	Sex.	Age.	Does the pupil habitually suffer from Inflamed Lids or Eyes?	State number of last line seen by pupil with Right Eye.	State number of last line seen by pupil with Left Eye.	Do the Eyes and Head habitually grow weary and painful after study?	Did pupil consult an Oculist and follow advice?	Briefly describe the Results of Treatment.

quested to make the tests, as rapidly as was consistent with their other work.

The examination should not be conducted in the presence of other scholars, as familiarity with the letters leads to incorrect responses. It should be ascertained if the child



Snellen's Test-types (much diminished size). A *majority* of the letters on the 20-foot line should be read by a normal eye, when sitting 20 feet from the card.

habitually suffers from red and inflamed eyes or lids, after which the visual tests should be conducted. The Snellen test-card should be hung upon the wall, in a good light, uncovered by glistening glass and on a level with the pupil's head. The letters are of such accurate proportions as to be seen by a natural eye at certain fixed distances: the large top letter, marked C C, being seen at 200 feet; the letters directly underneath, marked C, at 100 feet; the next line, LXX, at 70 feet, etc. The line marked XX should be seen at 20 feet, and is the test-line used in conducting the examination. The pupil should therefore be seated 20 feet from the card, and if a *majority* of the letters on the 20-foot line can be seen at this distance, credit should be given for the normal or 20-foot line. Each eye should be separately examined, the other being *fully* covered by a card, which is better than the hand or handkerchief, as the latter not only induce pressure upon the globe, thus impairing the test, but are conveyors of filth and contagion. The pupil should be

given credit for the smallest line of which he reads a *majority* of the letters, and the result inscribed as 20, 30, 70, 200, etc., in the appropriate line of the statistical blank, remembering that, if even the 200-foot line cannot be seen, the result should be written thus, 0. Time may be saved if two assistants can be secured; one to keep the records, the other to stand at the test-card and point out the letter lines, etc., while the principal sits by the pupil, covers the eyes, and conducts the test.

After noting the smallest line read by each eye, it should be ascertained if the pupil *really habitually* suffers from tired eyes or headache after study, care being taken that such troubles are not *imaginary*, after which the answer should be inscribed as "Yes" or "No," in the proper line. If inflamed eyes are not habitual, the pupil reads a *majority* of the letters in the 20-foot line with *each* eye, and does *not* frequently experience eye-tire and headache after study, the examination may be considered satisfactory; but if the reverse of this develops, a card of warning should be sent to the parent, urging that an "Eye-*Doctor*" be consulted at his office or dispensary. The word "Eye-Doctor" should be used, as many people do not discriminate between the words oculist and optician. The warning cards may be heeded or not, as the parent elects; it is not *obligatory*, and imposes no hardship. The *influence* of the principal *may* of course be exerted in the proper direction, but such influence must obviously not be directed in favor of any particular oculist or dispensary, but *should* be used *against* the consulting of opticians, at department stores or elsewhere. Children already wearing *distance* glasses should be tested with such glasses on the face, while those wearing glasses for *close work* should be questioned as to the existence of asthenopia when glasses are worn; by so doing much opposition from parents and attending oculists will be avoided.

The next two columns in the statistical paper refer to whether an oculist has been consulted or not, and as to the effect upon the child, his vision, school-life, headache, etc., in case an oculist *has* been consulted and his advice followed.

These two columns obviously cannot be filled in for some weeks or months, or until the principal's advice has been accepted or rejected, and in case of the former, an opportunity has been given to observe the results. When completed, however, the record should be sent to the board oculist, whose duty it shall be to report such records to the board of education.

Only such children as are deemed defective require statistical tabulation; the others are not further molested until the next annual examination, which should occur at the beginning of each school year. *Experience has taught that it is unprofitable to examine first-grade children.*

This is the test, and while it inflicts some extra work upon principals and is open to some objections, its benefits will be enormous, and will inevitably *lighten* the teacher's labor, by enabling many defective scholars to see at a distance and study without suffering. It must also be remembered that, owing to inexperience on the part of the principals and frequency of uncorrected ocular defectiveness on the part of the pupils, the first year's examination must inevitably be the most burdensome.

The report of our first annual examination shows that 25,696 children have been tested, of whom 8166, or 32 per cent., were deemed defective. Among these 6451 *eyes* were found possessing a vision of 20-30 or a little worse than normal; 2256 eyes had a vision of 20-40; 1214 a vision of 20-50; 1130 a vision of 20-70; 745 a vision of 20-100; 447 a vision of 20-200; and 43 eyes were practically blind; 4472 children could not use their eyes to a reasonable extent without eye-tire, headache, etc. The individual percentages of defectives in the different schools have ranged all the way from 11 to 67 per cent.; the latter occurring in a conspicuously poorly lighted and unsanitary building.

What have been the practical results? These have been difficult, and in short, impossible to completely estimate, owing to many causes of which a few will be enumerated. In the first place, such results cannot be *accurately* compiled, for obvious reasons, unless *all* examinations are made and

subsequently watched by a single oculist, either with or without assistants. Statistics compiled from numerous and unreliable sources are manifestly not entirely trustworthy.

In the second place, many reports received by the writer from principals were very meagerly filled out in the last column, referring to the effect produced upon the child by proper treatment. The writer knows of many instances where good results followed treatment, but where such results were not duly chronicled. Then a very large proportion of defectives are delaying the consulting of an oculist from various causes—among which may be enumerated heedlessness, carelessness, incredulity, pride coupled with financial distress, fear of being advised to wear glasses, the near approach of a long vacation, during which time such matters may be adjusted, etc. Many children who are debarred from seeking proper advice, from these and other causes, will naturally soon be enumerated among those who are deemed defective, sought counsel, and received benefit.

But notwithstanding these obstructions to progress, the annual reports recently studied, together with subsequent conferences with principals, show unmistakably that in the neighborhood of two thousand children have been signally benefited by the results of the preliminary tests.

Many near-sighted children unable to see blackboards, charts, etc., and debarred from comprehensively observing the world, and learning its lessons, have, by the aid of properly adjusted glasses, been placed upon an equality with their comrades. Many children unable to study without pain and fatigue, consequent upon hypermetropia or astigmatism, have by a similar remedy been relieved of their infirmity and enabled to assume high rank as scholars. Other children have been emancipated from the mortification incident to the possession of crossed-eyes, by an operation; while others have been placed on the road to good vision, by operative interference upon congenital cataracts.

Other channels of relief might be mentioned, if space permitted, but enough has been said to demonstrate that while statistical figures of an absolutely accurate character are

unavailable, and dependence must be placed on the "general results"—yet one may feel well assured that the plan, wherever made operative, will yield large and signally beneficial results.

One of the chief obstacles to satisfactory results has been the frequent consulting of opticians instead of oculists.

Since the adoption of this plan by the Board, our city has been flooded with fulsome advertisements and circulars from opticians to teachers, parents, and physicians; soliciting their trade and influence, and setting forth their especial adaptability to this line of work, with the assurance that, in case further consultation was necessary, the pupil would be sent to some oculist of the optician's choosing. It can be easily seen by an intelligent observer that, inasmuch as many have followed such erroneous leading, our work has been correspondingly embarrassed in its true usefulness, notwithstanding which great benefit has accrued, which will be enhanced another year, as the people become better educated on the subject. This preliminary examination is not merely proposed for the purpose of ascertaining the need of glasses, but in the hopes of disclosing the existence of almost all ocular diseases. The eye is not a merely mechanical machine, which, when "out of order," simply requires for its correction a pair of glasses. It is one of the most delicate and complex organs of the body, liable to the diseases of other living structures, and extremely sensitive to improper treatment, including the adjusting of glasses, which, if improperly performed, often leads to the direst consequences. Pathological ocular conditions, including refractive errors, cannot be properly diagnosed and treated without a good medical education, supplemented by special ocular instruction, fair judgment, and experience. It is, therefore, almost an insult to intelligence to urge that even the best opticians are incapable of passing judgment upon diseased ocular conditions or of properly correcting refractive errors, although they may frequently happen to give good satisfaction in recommending a pair of glasses. The truth is that in undertaking such work they are practicing medicine, and

should be legally restricted in their trade to selling, dispensing, and manufacturing glasses, a principle which has been recently emphasized by the Ohio legislature, in an Act restraining opticians from prescribing glasses, under improper circumstances.

I would strongly recommend that these facts be emphasized by school boards, superintendents, and principals, just preceding the occurrence of the school tests.

It may interest the readers of the REVIEW to know that at a meeting of the American Medical Association, held in Philadelphia in June last, I read before the Opthalmological Section a paper upon this subject, and that the Section officially indorsed this method for the preliminary examination of school-children's eyes in a set of resolutions, and recommended its use to all boards of education.

FRANK ALLPORT

MINNEAPOLIS, MINN.

VI

ON MEDICAL TEACHING

The doctrine of interest and theory of apperception are two great principles upon which modern education rests: the first states the most favorable conditions for the production of mental activity: the second describes the steps by which knowledge is acquired. These generalizations constitute universal laws of teaching, for they are based upon the investigation of psychological processes involved in learning.

Interest always has been used in education to enable the teacher to impart more facts, but in itself was deemed of no more importance than the sugar coating of a pill. Modern teachers, however, make the awakening of a many-sided interest one of the aims of education, and to this purpose subject-matter is subordinated. By creating both thoughtfulness and the desire for more facts, interest assures assimilation and is called the " long lever-arm of education "; it also furnishes a guarantee for further progress after the pupil's formal training is completed. Psychological analysis gives interest its high place in modern education and shows why it can be used as a reliable test for any curriculum or method of instruction.

The theory of apperception states the laws governing mental assimilation. We build the new upon the old; our grasp of a new idea is controlled by the character of the older group of ideas already existent in the mind, and all teaching must aim at preserving a certain relation between the new material offered and the content of the mind. A study of the processes of apperception gives a death-blow to the theory that the mind can be filled with, and retain, isolated facts. The new idea must find itself at home; it must be at once welded to the old, or it will rapidly slip

away. Under the older educational systems much effort was wasted by expending mental energy upon improperly related facts.

To apperceive, however, requires mental activity, and this can be assured only when the mind occupies that attitude toward a subject which is denoted by the term " interested." Modern educators claim that the physiology of mental processes should be studied by every teacher in order that subject-matter may be presented in a way that conforms to those processes. The law of apperception furnishes the line for constructing a rational educational plan; interest gives that plan its dynamic value.

The curriculum of a medical school represents an analysis of medicine into various subjects, which are presented to the student in what is considered to be their logical order. First, anatomy, physiology, and chemistry; then materia medica, pathology, and therapeutics; finally medicine and surgery. Evidently the design of the curriculum is to fill the student-mind with knowledge; it begins with laying solid foundations of elementary subjects and upon these building the superstructure of medicine and surgery. The same logical principle rules the order of presentation of any one subject; anatomy begins with the thorough study of the bones; before the action or use of a drug is taught, its habitat, appearance, and chemistry must be learned.

Such a curriculum may be logical when subject-matter alone is regarded, but it does not represent the order in which the mind most easily acquires knowledge. The mind cannot be looked upon as passive and waiting to be filled; to apprehend a fact requires activity, and this activity, so essential for learning, is best aroused when the student's mind comes into contact with a subject at the point most favorable for awakening interest. It is the fruit or flower that stirs in us the desire to study the details of botanical structure; it is the disease or injury that gives anatomy and pathology their great importance. The medical curriculum violates the doctrine of interest at the very start; instead of stimulating mental activity at the outset by beginning at

the point of greatest interest, it wearies the mind and interposes the resistance of the least attractive subjects. Instead of aiming to give the student an impetus which will carry him over the dry details, it attempts to get up speed by applying friction; it adds a handicap just as the student steps upon the race-course of medical instruction.

The study of apperception shows that the value of facts depends upon perceiving their relations to other facts and that this act of perception is a great aid to the development of interest; delay in forming connections between facts means their isolation and brief retention. In the construction of the medical curriculum correlation does not appear as a guiding principle; the student receives his knowledge in pieces, which must be held in the memory and later put together like parts of a picture-puzzle. The value of anatomy, pathology, and therapeutics becomes very evident when these subjects are presented in their relations to medicine and surgery, but a delay of months or years between the presentations of related subjects means a loss of many ideas necessary for apperception, and the imperfect grasp of the new ideas.

The medical curriculum is constructed with utter disregard of the laws of apperception; instead of recognizing mind as the controlling factor, it obliges the student to expend a part of his power in bending his mind to conform to a rigid plan governed by subject-matter alone. Medicine is a difficult science to teach at the best, yet our medical faculties arrange a curriculum which both displays their own pedagogical ignorance and adds to the labors of the student.

Not always have medical faculties originated from an honest desire to teach medicine, but often the chief aim has been to give prominence to themselves. From the commercial side, it is very profitable to be known in the community as a professor and to have the opportunity of giving the impression of extensive knowledge to numerous young men who, in their difficulties, naturally will turn to you for counsel. In many schools these commercial interests crowd upon the educational and lower the standard of instruction.

The didactic lecture, so largely used in medical teaching, makes prominent the professor and gives grand opportunities for pyrotechnic displays of learning which fairly dazzle the admiring audience. Hence this form of teaching has clung tenaciously to the medical schools; it forms a part of the compensation of the medical instructor.

From an educational standpoint, the didactic lecture has few redeeming features. Rarely, in undergraduate teaching, do we wish the personal views of the lecturer; hundreds of clearly written text-books will give us the consensus of opinion upon any branch of medicine, and where the primary aim seems to be the imparting of a large number of facts the didactic lecture is a roundabout way to the goal. In a lecture facts are fired at the class in repeated volleys, but the lecturer has no idea how often he misses the mark. Consider the labor of preparing lectures, the exertion of delivery, the mental energy expended in cramming, and the net result of permanent knowledge seems very small in proportion to so much effort.

The gravest charge against didactic lecturing is that there is no assurance of the development of thoughtfulness. Telling is not teaching; language has not the power of transmitting ideas from speaker to hearer unless the apperceiving mental content becomes active. The lecturer is controlled chiefly by his subject-matter and assumes that every fact is grasped as uttered; he has no means of knowing how far he arouses that mental activity upon which his entire success as a teacher depends.

During the past few years a recitation system has been in use in many schools. The student commits to memory the facts from a certain number of pages in a text-book and the recitation merely tests his power of retention. As educational exercises most recitations are wretched, but for cramming they are far more effective than the didactic lectures, for the facts come direct to the mind without filtering through a notebook.

The system of medical teaching naturally leads up to an examination which is chiefly a memory test. The students

appreciate that facts are the things valued, and in almost all medical schools cramming for examination is developed to a high art. By means of trained "quiz masters" the tide of the student's knowledge is brought to high-water mark at the hour of examination: the ebb sets in immediately after, and with great violence.

From this cursory view of medical teaching we reach the following conclusions: Curriculum and method of teaching seem to aim at a filling-up process; even this aim is wastefully accomplished, for the student works unnecessarily hard by being called upon to learn and relearn disjointed facts. During the course mental activity is neither properly stimulated, directed, nor tested. In proportion to effort expended, the net results are poor.

At present there is a strong tendency toward increasing the length of the medical course by the addition of a fourth year, and many schools have taken a step in this direction. The trouble with the medical course is not its shortness, however, but the poor quality of the teaching. Not until the instruction during three years has reached its highest efficiency can we discuss intelligently the question of a fourth year. It should be our object to diminish the percentage of waste and see whether three, or even two, years of good teaching may not be more advantageous than four years of poor. If modern education rests upon physiological grounds it should be a time-saver for the student, and he has a right, at present, to view with some suspicion the demand that he spend a fourth year in his medical training. To pour more facts into our students by no means necessarily increases their power; it is time medical instructors distinguished between quantity and quality.

As the doctrine of interest and the theory of apperception formed the basis for criticism, so do these same principles determine the lines along which reform should travel. The curriculum should present the subject at the point of greatest interest, it should begin with clinical instruction; around the patient, or at least the disease, we should group anatomy, physiology, pathology, therapeutics, etc. Clinics

for first-year students should be an important feature, and with these everything else should correlate. For instance, a case of gastric disorder would serve to introduce the anatomy of the digestive tract, the physiology of digestion, and the action of certain drugs upon mucous membranes and secretion.

In all well-equipped schools there is enough clinical material about which the main features of the other subjects could be grouped. The curriculum would then present the facts in their normal relations, and the student would be stimulated by the interest which always accompanies apperception. The limits of this paper forbid a detailed description of a curriculum constructed upon modern principles, but the problem is not difficult when the aim is understood. No new subjects need be added; medicine and surgery would form the backbone of the entire course, and with them the other branches would be articulated. The amount of material presented to the student probably would be less than at present, for the completed curriculum would represent an economical, as well as scientific, adaptation of subject-matter to mind.

The didactic lecture and parrot-like recitation should be relegated to the museum for mediæval curiosities. The student should get his facts from the books, the laboratory, and the hospital ward; in the recitation and clinic the student should be trained to handle these facts. The modern recitation recognizes that permanent and effective knowledge must be elaborated by ourselves; only the energy of our own thinking can give dynamic value to our ideas. A properly conducted recitation causes the student to do his hardest thinking in the classroom; under the guidance of his instructor he reasons and deduces principles from the store of facts previously acquired. The doctrine of interest and theory of apperception control each step in the recitation, and not merely the possession, but the thorough assimilation of facts is the test of effective teaching.

So much has been written about method and the principles involved in conducting a recitation that the instructor

who holds a position in a medical school and makes no effort to fit himself for teaching shirks his duty; he is content to lag behind the times and do slovenly work. Anyone who knows more than his hearers can fill a lecturer's place, but the proper conduct of a recitation requires ability, application, and skill; the modern recitation offers a field worthy of the best intellects.

With every medical school there is connected a large number of men who teach independently of one another. If the work is to reach its highest efficiency, there must be some sort of organization among instructors. There should be regular meetings of the teaching corps, at which plans should be submitted for discussion and the proper amount of correlation assured. An instructor should be prepared to state and defend his plans on pedagogical grounds and free criticism be invited. In all other departments of education such meetings are considered indispensable; medicine is not so easy to teach, nor are the men engaged in it so superior, that they can dispense with such aids for effective work.

It is not the purpose of this paper to discuss every change involved in the application of " the new education " to medicine, but rather to indicate some of the main lines along which reform should come; nor should it be understood that every medical school, to the same extent, illustrates poor teaching. Here and there are instructors who, particularly in clinical and laboratory work, use the development method of teaching and appreciate the meaning of interest, correlation, and apperception. But a careful examination of a large number of catalogues fails to show one medical faculty, as a body, expressing a modern attitude toward education. Announcements may call attention to increased laboratory and hospital facilities, a longer course of study, etc., but contain nothing to show that the field of medical teaching has become affected by those educational advances so conspicuous in primary and secondary schools. Until medical teachers awake from their " dogmatic slumbers " there can be no step forward.

Let us anticipate two objections which are made again

and again. Many point to the number of great men produced under the old system. Why change a system which has produced such grand results? This is the argument which meets every attempt at progress; in the cities of the Middle Ages many people grew up to a ripe old age under conditions which, to-day, would land those responsible in prison; an equally good argument against sanitary reform. When we wish to judge of the value of a surgical procedure we ask for the rate of mortality, and a number of brilliant successes count very little compared with a high death-rate.

The second objection is that modern teaching demands too much of the instructor; unless better paid, a physician cannot afford to give so much time to educational work. This objection constitutes the reproach of medical teaching, for it means that a man is willing to accept a place in the medical school and then knowingly give the student a poor article for his money. Such a man has no business to be a teacher, and the medical school would be better off without him; he probably is keeping out a better man, and, while posing as a martyr, is sacrificing educational interests for the sake of personal prestige.

It is to the medical departments of the large universities that we should look for the first steps toward improved teaching, for only large schools can offer the inducements for men to prepare themselves as teachers. The majority of students are conscious of working along lines of resistance and feel that they will forget a large part of the information as at present poured into them; they would appreciate the saving of time as well as the better education to be gained in a school conducted upon rational principles of teaching. The small, poorly equipped schools which turn out the half-trained men would be driven from the field from lack of support, and the general standard of medical education would rise.

It is high time that the medical instructors appreciate the fact that they are not exempt from the general laws of teaching, and that the future medical student is now receiving his preparatory education along modern lines. Is it likely

that, when he reaches the professional school, he will be content to be subjected to methods of teaching long ago deemed obsolete?

The object of medical education is the development of power in a special field, and this object is not accomplished merely by the presentation of a large number of facts. Reform in medical teaching does not mean that medicine will be made easy; it means the adoption of methods by which every particle of mental energy expended is realized by the student in the shape of increased power; it means the economy and concentration of effort during three years, and not diffusion over four; it means that the medical instructor must not only know his subject but learn something of the science and art of teaching.

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VII

DISCUSSION

ELEMENTARY GREEK FOR COLLEGE FRESHMEN

The thesis which I shall attempt to defend in this paper is that Greek should be taken out of the preparatory school and made entirely a college study. I take this position not because of want of appreciation of Greek, nor because the change would bring us nearer to an ideal scheme for culture education, but because the change seems inevitable. The A. B. classes are continually growing proportionately smaller, and the young people are going to the B. S. courses and to the technical schools for culture education. The retention of Greek in the preparatory school is largely responsible for this. Relegate it entirely to the college, and the situation will be greatly relieved. I offer a number of considerations which, taken together, I think, fully substantiate my position.

1. Notwithstanding the efforts of college men and the heads of training schools to encourage the study of Greek, only four per cent. of the students in the secondary schools of the United States study this language, while thirty-five per cent. study Latin. These figures are taken from the last report of the United States Commissioner of Education. Now, the colleges must look to this four per cent. for their A. B. students, while, if Greek were taken out of the secondary school, they would have the thirty-five per cent. to draw from. The thirty-one per cent. who study Latin without the Greek must take the college B. S. course which contains no Greek, or go to the science or technical school. I know many young men now in such schools who are there for culture and to get a degree, and who never expect to practice the profession or art which they are studying. Abolish preparatory Greek, and I am sure that there would be a large increase in the number of A. B. students. This

would occur even though Greek be not made an elective in the A. B. course, which I think must ultimately be done.

2. The change would greatly relieve the training schools. Secondary studies are now so numerous that no course can include them all. The most formidable task before the Committee of Ten was to arrange a workable schedule for secondary schools. Greek, Latin, English, mathematics, science, and history, to say nothing of French and German, cannot well be crowded into a four-years' course. Omit Greek, and the programme is workable.

3. Great relief would also accrue to the college. It is the exception, rather than the rule, for an applicant for admission to the Freshman class to come well prepared in Greek. This is certainly true with the Western and Southern colleges. The classes are, therefore, not homogeneous. Many of the students have to work off conditions, and it is only by dint of coaching and cramming that they are able to pass the examinations. It were better to begin at the beginning.

4. The change is fast becoming a necessity. Greek is not generally taught in the secondary schools. While it is offered, the students do not take it. In fact, the people do not want Greek in the secondary school. It has been, *de facto*, crowded out, and the best we can do is to give the outcast a warm welcome into the college course.

5. After all, there is no great necessity for preparatory Greek. An extended study of the language is not essential to a culture course. A little Greek is needed for the proper understanding of English and the tracing of etymologies. This knowledge may well be obtained in a two-year's course in college. Again, a full four-years' course of Greek in college, five hours a week, will give the student who elects it as a special study as good a knowledge of the language as he gets by present methods.

6. The last and most potent reason which I mention for transferring Greek wholly to the college is that the interests of culture education imperatively demand it. The student does not usually decide fully the question of going to college until the close of his preparatory course. He then

finds himself confronted with the fact that, without Greek, he cannot enter, and the alternative of two years more in the training school or no college course is before him. Too often he chooses the latter. It would be far better for the colleges to require for admission only what the secondary schools can and will do well. Latin will give no trouble, as it is a popular and general study. Mathematics, English, history, and elementary science are also commonly taught. If only these are required, students may be well and uniformly prepared in nearly all the secondary schools, and the number which may be induced to take the A. B. college course will be greatly increased.

In view of these and many other considerations which might be mentioned, I plead for the introduction of elementary Greek in the Freshman class in college. I do so in the interest of both preparatory school and college, in the interest of the youth of the land, and in the interest of education.[1]

J. I. D. Hinds

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[1] Such courses as the writer advocates are already offered to Freshmen in Cornell University and in Columbia College.—Editor.

VIII

REVIEWS

Psychology and the psychosis: Intellect—By DENTON J. SNIDER. Sigma Publishing Co., St. Louis, 1896. 556 p. $2.00.

This book is evidently the echo of the work done in St. Louis by the present United States Commissioner of Education, Dr. W. T. Harris. It reflects very distinctly the remarkable influence exercised by him upon many of the thinkers and educators of that region. It is Hegelian to the core, and I do not know a native American work which has put so well the Hegelian psychology in anything like tangible terms. There are obscurities enough, as there are bound to be in all attempts to express Hegelian thought in English; but the present volume, in spite of much that is the despair of the experimentalist and of the common reader, clothes in reasonably clear terms the ideas of that school. There is nothing slavish in the style, and no one would suspect its lineage who did not already understand the great German, or the relation of Dr. Harris and the author to him. The style is independent and moved by the desire to put the case intelligently, and perhaps nothing but the extreme difficulties of the problem prevents entire success. There are many of the paradoxes incident to Hegelian philosophy, but they are tempered by that broad, humane, and intellectual sympathy with every department of thought and action, not excluding education, art, and religion, for which masters and disciples of the Hegelian school are so conspicuous.

It is the Introduction that is most open to criticism on the ground of obscurity, though it is delightful to see with what courage the author faces the fundamental problems of the Ego; and it is also pleasant to remark that he is himself somewhat conscious of the limitations and difficulties of his nomenclature, as evidenced by the admission that the reader's efforts to master it may be vain.

When the author comes to the subject of Apperception he is at his best. Here is the best part of his work, and I do not know a better chapter on that subject, barring some affiliations of expression with the school from which he comes. The discussion of this subject is very clear and instructive. It is valuable as emphasizing *assimilation* in the process rather than attention, which, though it is an important element, too often conceals the most important part of the apperceptive process. The remaining parts of the work have considerable interest as giving piquancy to the idealistic way of looking at the world, though the author does not intrude that point of view upon the reader.

JAMES H. HYSLOP

COLUMBIA UNIVERSITY

Talks on writing English—By ARLO BATES. Boston: Houghton, Mifflin & Co., 1897. iv + 322 p. $1.00.

The sound doctrine of composition has seldom been presented in more persuasive sermons. Professor Bates's Lowell Lectures, being less systematic than Professor Wendell's, and more ethical, should be even more popular. The popular inclination, moreover, is toward the sayings of the artist about his art rather than toward the sayings of the critic. And mistaken as this tendency may be, it will lead to nothing but profit in this case. There is even the justification of such passages as the following, which not only smell of the workshop, but also suggest modifications in theory:

"Elegance is chiefly the ability to convey in words the mood of the writer," p. 86.

"The writer must content himself with a reawakening and rearrangement of . . . images already in the reader's mind. His effect of novelty must come from fresh and untried combinations; from the vividness with which he is able to arouse these remembered images until they appear so real as to seem new," p. 183.

"In art spontaneity is impossible until the technical method has been so perfectly mastered that the creative impulse is unhampered by inability to express itself," p. 211.

"It is less easy to make an actual person real in the mind as a part of a fiction than it is to realize a person practically imaginary," p. 261.

Of what is more general and fundamental there is naturally nothing new. Professor Genung and Professor Wendell apparently said the last word for their generation when they added to Bain's work a definite terminology. In method there is still progress, and Professor Bates contributes his share:

"The best technical training is that which is entirely dissociated from any idea that permanent work is being done," p. 21.

"This characteristic need of clear-cut accuracy makes especially appropriate the taking up of Exposition at the start; and . . . this sort of composition is of great help in intellectual growth," p. 131.

"It is well to accustom the mind to measure compositions by the number of words," p. 135.

"A phrase or a sentence can be more readily shaped and modified while it is fresh," p. 276.

"Reading aloud in English from a book in another language is excellent practice in . . . training the mind to quickness in the use of words," p. 282.

"A pupil's education is a unit. . . . The translation which injures the pupil's use of his own tongue does him a harm which cannot be atoned for by any knowledge it gives him of another," p. 283.

It is much to the author's credit that he pronounces only once (pp. 50-51) on a matter of good use. After complaining of those persons who insist on saying *fastly* (!), he goes on:

"An adverb is sometimes properly used in its flat form with an imperative when in other cases the form in *ly* is proper. We say, for instance, "walk slow, walk slower; but 'He walked slowly across the field and more slowly over the bridge.' Nothing but the careful training of the perceptions avails for distinctions such as these."

The point of departure here is Professor Earle's *English prose* (p. 264), but the distinction seems to be peculiar to Professor Bates. Shall we live to see the day when individual preference in such matters will be rated at its true value, or are we doomed forever to the dissidence of dissent?

The style is suggestive rather than precise, and the treatment too discursive to admit more than a vague classification by chapters. Indeed, the book is as much for the artist

as for the artisan. But it is more than a guide for amateurs: it deserves the attention of every reader of themes.

CHARLES SEARS BALDWIN

YALE UNIVERSITY

Macaulay's Life of Samuel Johnson, together with his Essay on Johnson—Edited with Notes and an Introduction by HUBER GRAY BUEHLER. Longmans, Green & Co., 1896. 110 p. 60 cents.

Goldsmith's Vicar of Wakefield—Edited with Introduction and Notes by MARY A. JORDAN. Longmans, Green & Co., 1896. 305 p. 75 cents.

The De Coverley Papers, from *The Spectator*—Edited with Introduction and Notes by D. O. S. LOWELL. Longmans, Green & Co., 1896. 174 p. 60 cents.

Southey's Life of Nelson—Edited with Notes and Introduction by EDWIN L. MILLER. Longmans, Green & Co., 1896. 302 p. 75 cents.

Milton's Paradise Lost—Books I and II—Edited with Notes and Introduction by EDWARD EVERETT HALE, Jr. Longmans, Green & Co., 1896. 42 p. 50 cents.

The scope and purpose of Longmans's English Classics Series, to which these books belong, have already been explained in the pages of this REVIEW.[1] It is, therefore, unnecessary to say more than a few words on the comprehensive excellence of the general editor's plan, and its careful adaptation to the precise object in view. The efforts of the Committee of Ten to improve the study of English in our preparatory schools are likely to be ably seconded by a series which will furnish all the English texts required for admission to college, not merely well edited, but, what is perhaps even more important, edited upon uniform and consistent principles. Masterpiece after masterpiece being thus approached in the same manner, the series becomes an instrument of training in methods of study for both teachers and pupils, and, as such, a steady if unobtrusive influence in shaping the teaching of English in our schools.

Differ as we may about the best way of teaching English literature, we are likely to agree that this series is built in the main upon the right lines. It is unexceptionable in its outward form and habit. It gives us in every case a clearly printed text, sufficiently annotated but not, as a rule, overweighted with pedantic comments; a biographical and criti-

[1] EDUCATIONAL REVIEW, December, 1895, and February, 1896.

cal Introduction; a bibliography, through which the student can find his way to the literary and historical setting of the particular classic on which he is engaged; a chronological table, and some hints to teachers—often of a most suggestive and helpful character. In every case we thus have a book edited according to an excellent general plan.

In the hands of different editors this design is, of course, carried out with different degrees of success, and the recent additions to the series, while sharing in the merits incidental to the general scheme, are otherwise of somewhat unequal value.

The edition of Macaulay's *Johnson* by Mr. Huber Gray Buehler reaches the high standard set by certain previous issues in the series. There are some excellent school editions of this essay, but Mr. Buehler's is good enough and individual enough to be distinctly welcome. The section on Macaulay's style and genius is finely balanced and discriminating, and indeed the whole Introduction is worthy of praise. A few points are open to criticism. In the notes Collins is briefly spoken of as, "*after* Gray the greatest lyric poet of the eighteenth century." The statement may be correct, Mr. Swinburne to the contrary, but it seems to me a mistake to put what is, at best, a matter of critical opinion in a dogmatic form.

Goldsmith's *Vicar of Wakefield*, edited by Mary A. Jordan, is also a creditable addition. The colleges require that the book shall be merely read, not studied, and the editor has shown a wise restraint in the matter of notes, believing, as she tells us in the Preface, that the book has little to gain from the commentator. The sketch of Goldsmith, otherwise good, hardly does justice to the lovableness, vanity, and ingenuousness of his mixed character.

Mr. D. O. S. Lowell's edition of the *De Coverley papers* is hardly so satisfactory. By an inversion of the order usually followed in the series, the critical comments precede the biography, so that the student reads of Steele's founding *The Tatler* and Addison's contributing to *The Spectator* before he is told who Addison and Steele were. The Introduction, as a whole, seems to show a lack of feeling for relative values.

Why should a couple of pages be devoted to probing the weak places in Thackeray's picture of Addison and Steele at the Charterhouse? There is much for a beginner to learn; why occupy his attention by telling him what he is not to believe? The style, moreover, is not always unexceptionable.

Mr. Edwin S. Miller's edition of Southey's *Life of Nelson* has also some weak places. On the first page of the Introduction we encounter this surprising generalization: "If to the battle of Trafalgar and the battle of Waterloo we owe the present conformation of the map of Europe, we owe to them no less the writings of Coleridge and Wordsworth, Byron and Shelley, Macaulay, Scott, and Carlyle." The slightest attention to chronology shows the untenableness of such a notion in the case of Coleridge and Wordsworth, even if we did not know that their original inspiration was rather the rise of democracy during the French Revolution than the downfall of Napoleon. It certainly is not true of Scott as a poet, for all his best poetry was written earlier, nor can I think that we owe the "Waverley" novels to the triumphs of Nelson and Wellington, although they followed those events. The thought of Byron and Shelley as inspired by a sense of England's greatness during the years of the Holy Alliance is certainly novel. The style of the Introduction could be simplified, in places, with advantage. The purpose of literature is said to be, *inter alia*, "to solemnize the nuptials of the finite and the infinite, to embody what may be in terms of what is" (p. xvi). The direction, not to "be afraid of facts" (p. xxviii), is concise but enigmatical.

Even older readers are apt to regard *Paradise Lost* from a respectful distance, and in his attempt to introduce young readers to the first two books Professor Hale had undoubtedly a difficult task, which, in some respects, has been most acceptably performed. The notes are, as a rule, sensible and helpful; the illustrative extracts from the classic epics and from the Bible are a valuable and, so far as I am aware, an original feature; and some of the critical sections of the Introduction—notably those on style, the similes, and the meter—are well and carefully done. Unfortunately, Profes-

sor Hale is not always equally successful. The biographical sketch fails to give any clear impression either of the man John Milton, or of his life. Although Milton's life and character are the best of commentaries on his work, the editor begins his sketch by warning us that interest in the life of a poet often draws us away from the enjoyment of his poetry. The Life, which follows, is hurried and apparently perfunctory (we are not even told the date of Milton's birth except in the chronological table), and chiefly composed of autobiographical passages from Milton's prose and verse, strung together by explanatory comments. The space given to these passages is disproportionate, as the sketch does not give the scholar enough understanding of Milton to make their full interest apparent. Some of the critical portion is open to question. The assertion that Milton "had no predecessors" (p. xvii) seems too unqualified. According to Dryden, Milton himself declared that he was the poetical son of Spenser, while the influence of the Elizabethans is plainly discernible in his earlier poems. In *Paradise Lost* he had, of course, predecessors, although he may not have availed himself of their work. The description of *Comus* as " the gallant allegory of a young man " (p. xx) is at best ambiguous. The Civil War is said to have put an end to Milton's " serious but *light-hearted* poetry " (p. xxi). Professor Hale is apparently referring to *Comus*, but *Comus* was not the last poem Milton wrote before the Civil War, nor was his poetry immediately before that event " light-hearted." We already hear in *Lycidas* the deepening note of warning and reproof. What the Civil War probably " put an end to," for the time, was the projected work on the Fall of Man. Such slips detract from the general excellence of Professor Hale's work.

Finding faults is an ungracious task, and I am anxious rather to reaffirm my appreciation of the value of Longmans's English Classics Series as a whole. The average excellence of the additions to it, just considered, may fairly be called high. Taking the series as a whole, perhaps a trifle more stress might be laid on the place of the various classics and their authors in the large movement of history and litera-

ture, but for the rest I cannot see how its general character could be improved.

HENRY S. PANCOAST

PHILADELPHIA, PA.

Legends of the Rhine—H. A. GUERBER. New York: A. S. Barnes & Co., 1895. xii + 350 p. $2.00.

Myths from northern lands. Narrated with special reference to Literature and Art—H. A. GUERBER. New York: American Book Co., 1895. 319 p. $1.00.

Legends of the Middle Ages—Narrated with special reference to Literature and Art—By H. A. GUERBER. New York: American Book Co., 1896. 340 p. $1.00.

These three books will prove very useful to anyone at all interested in the literature that deals with, or is based upon, Teutonic mythology. Miss Guerber shows herself to be a conscientious and faithful compiler, with literary taste and ability, and in these volumes she has gathered up and put into attractive form the myths and legends that have been current in western Europe for a thousand years or more. These stories have become so thoroughly woven into the literature of our own time that the young reader, and even the scholar, finds necessary some account of these romances in their earlier form. The outlines are written in plain but not childish language, and even the scholar may turn to them knowing that he is reading a scholarly and reliable account. They cannot be regarded as a manual of mythology, nor as a series of critical essays, but rather as a synopsis of many of the epics and romances of the Middle Ages. The author has given no attention, or very little attention, to the earlier and more obscure versions, all disquisitions have been avoided, and explanations have been given only where they seemed essential. Frequent quotations from Tennyson, Morris, Longfellow, and others are introduced to illustrate statements in the text. A large number of illustrations, for the most part reproductions of works by celebrated artists, make the books more attractive and help to impress the text upon the reader. Excellent indexes accompany each book, thus making them very convenient for reference.

In the first of these books the writer gives a brief descrip-

tion of the Rhine, and then, beginning at the mouth of the river, she relates the numerous legends in their natural sequence as one goes up the stream. The second book is devoted almost entirely to Teutonic mythology, and to it there is added a chapter giving a very good comparison of the Greek and the Teutonic mythologies. The third book gives the longer and greater legends upon which the finest literary productions of the Middle Ages are founded, such as Beowolf, Gudrun, Nibelungenlied, and Cid. This book closes with a chapter devoted to a general survey of romance literature.

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Plane and solid geometry: Suggestive method—By C. A. Van Velzer, Professor of Mathematics, University of Wisconsin, and George C. Shutts, Professor of Mathematics, State Normal School, Whitewater, Wis. Madison, Wis.: Tracy, Gibbs & Co., 1894. viii + 395 p. $1.25.

In these days of the multiplication of text-books on geometry, it is a pleasure to meet with one written on original lines and in accordance with tested pedagogical principles. The work before us marks a radical departure in the writing of a text-book on geometry, presenting more the appearance, both in method and in development, of a scientific laboratory manual. Indeed, the authors have carefully avoided the time-worn rut along which most other works trace their method. Without departing essentially from the traditional logical arrangement, slight changes in the usual scientific classification of subject-matter occur wherever such departure is deemed conducive to a readier grasp of the subject by the average pupil.

The educational value of geometry, as a means for the cultivation of a logical appreciation, is about wholly destroyed by the use of books containing clear-cut demonstrations of propositions. Such demonstrations function as a handy "key," and from their very nature force the student to regard geometry as a memory exercise of logical deductions. The book before us, on the contrary, compels the student to make his own observation of relations, to judge in-

dependently, and to make geometrical generalizations, just as he is compelled to observe, to judge, and to generalize in the scientific laboratory, being guided by a series of leading suggestions logically arranged. The general treatment of this laboratory method of getting at geometrical truth is in the highest degree pleasing. For example, the theorem, "*An inscribed angle is measured by one-half its intercepted arc*" (p. 112), is treated as follows:

"Let A be an inscribed angle, whose sides intercept the arc BC.

"To prove that the angle A is measured by one-half the arc BC.

"There are three cases.

"Case I. When one side of the angle passes through the center of the circle.

"Sug. 1. Connect O, the center of the circle, with C.

"Sug. 2. Compare $<A$ with $<OCA$. Give auth.

"Sug. 3. Compare $<BOC$ with $<A$. Give auth.

"Sug 4. By what arc is $<BOC$ measured? Why?

"Sug. 5. Then by what part of the arc BC is the $<A$ measured?"

The two other cases of the theorem are developed in a similar manner, the student is directed to compare his conclusions in the three special cases, and then a "Therefore ——" compels generalization.

A comparison of the above treatment of this theorem with the usual cut-and-dried, lifeless demonstration reveals the true pedagogical significance of the book. If students are to be given text-books as an aid to study, those books should indicate the way to the acquisition of truth, and through the knowledge so gained create the valuable discipline inherent in the mathematical sciences. In other respects, also, the work presents commendable features. For instance, definitions are introduced as need for them arises, regard being paid to the proper psychological moment. Again, a wealth of original exercises (about four hundred) is interspersed among the theorems, enabling the student to make immediate applications of general truths to particular cases. The subject of limits is treated in a simple manner,

and its application to various theorems is ingeniously developed by the suggestive method.

A book like this one, written on rational principles, cannot fail to find due appreciation among teachers of geometry in secondary schools. Indeed, it is as valuable as a book on methods of teaching geometry as it is a text-book for students. It is very probable that the suggestive method will not have a tendency to become mechanical in operation as is the case with the usual lack of method; for the great interest created in the student in the direction of self-active discovery of truth, the concomitant concentration of attention aroused, and the increase of logical power developed, will effectively ward off a tendency toward listless rote work.

Professors Shutts and Van Velzer have, in this book, made a valuable contribution to the cause of improved methods of mathematical teaching and text-book writing.

GEORGE B. GERMANN

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Number and its algebra—By ARTHUR LEFEVRE. Boston: D. C. Heath & Co., 1896. 230 p. $1.25.

So rare are treatises on the pedagogy of mathematics, and so lively is the interest in such subjects, that a work with the above title can hardly fail to excite a genuine interest among teachers. Especially is this true when, as in the present instance, the author writes as one impressed with a mission and minces no words in setting forth his views. An example of this plainness of speech is seen in the criticism of McLellan and Dewey's *Psychology of number*, and in the very good hit at Dr. Harris as one "who—*pace*—writes better than he edits." In pedagogical matters the progressive spirit of the author frequently shows itself, as in the theory of number in general, in his remarks on the teaching of the metric system, in the placing of long before short division, in his views on the division of fractions, and in his epigram, "Bad mathematics is bad pedagogy as well."

But while the purpose is a laudable one,—to present a clear view of the science of pure number, and thus to bring teachers to consider a subject upon which there is much

ignorance abroad,—the execution of the work is not of a character to give it high standing.

In the first place, it lacks scholarship. It is confessedly written with no access to the great works on the subject, and with little apparent knowledge of more than a couple of writers, neither of whom would claim to rank as an authority. The result is seen in numerous inaccuracies running throughout the work. We read of the "late vulgar use of the word billion in American newspapers"; that it is unknown whether the Hindu algorithm now in use was invented by one person or was a gradual growth; that negative numbers were "long *called* imaginary," and so on; statements so misleading as to be substantially false.

The danger, too, of writing with the fire of a zealot is seen in many expressions which will be challenged by most readers, and for which good usage will be sought in vain. Thus, "there is no such thing as an algebraic law;" "all talk about carefully distinguishing multiplier and multiplicand . . . is sheer nonsense;" and negative numbers should never be explained by reference to right and left, or capital and debt. This tendency naturally leads to the use of striking language, and so pupils excogitate, and terms are volumetric, and conceptual energies play a part, and neonomic, protonomic, and stirpal numbers are recommended for our schoolroom use.

Moreover, it is to be feared that the author has overestimated the lack of material already accessible. And hence it is liable to come to pass that most of those who really read the book will seek in vain for much that is at the same time new and valuable. Nor is it improbable that some, after thoroughly considering the innovations proposed in language and pedagogy, may turn to this sentence (p. 128) and ponder upon it, wondering: "Modern tyros in pedagogics would have done better to consult wise predecessors than to follow every fad of educational milliners as they vie with each other in designing latest fashions."

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter

The Harvard Seminary of American History and Institutions continues to put forth studies that are both important and interesting. The latest volume is Mr. Frederick W. Dollinger's *Nominations for elective office in the United States*, in which the history of the present practice in this country is carefully traced, and the several remedies that have been suggested for manifest abuses are weighed (New York: Longmans, Green & Co., 1897. 209 p. $1.50).——Dr. Belfield of the Chicago Manual Training School has edited an attractive little volume of Lord Chesterfield's famous *Letters* (New York: Maynard, Merrill & Co., 1897. 159 p. 24 cents).——*Some aspects of the religious life of New England* is the title of the volume containing the Carew Lectures for 1896, delivered by Dr. George L. Walker (Boston: Silver, Burdett & Co., 1897. 208 p. $1).——A student's edition, cheap and well made, of Bryant's translation of the *Iliad* has just come from the press (Boston: Houghton, Mifflin & Co., 1897. 2 vols. in one. 687 p. $1).——The revised and enlarged edition of Dr. Williams' *Topics and references in American history* is cordially commended to all teachers of that subject (Syracuse, N. Y.: C. W. Bardeen, 1897. 180 pp. $1.00).——Professor Guyot Cameron of Yale has made a charming little book in his *Selections from Pierre Loti*. It deserves to be widely read, as literature (New York: Henry Holt & Co., 1897. 185 p. 70 cents).——A genuine aid to the intelligent study of *Heimatskunde* is given by Dr. Dryer's *Studies in Indiana geography*. The conception and execution of the book are excellent. Particularly worthy of mention is the topical analysis for the study of Terre Haute (Inland Publishing Co., 1897. 110 p. 50 cents).

EXTRACTS FROM EDUCATIONAL REPORTS

Superintendent Charles B. Gilbert, Newark, N. J. . . . Report for 1896

Kindergartens—The great bane of schools is formalism. The belief that to give children knowledge of a few facts and a few arts constitutes education, and is in itself valuable,

is not well founded. That education which makes for righteousness, and hence for good citizenship—the education which a free State must give its children in order to insure its own perpetuity—must include something more than the imparting of knowledge of the secondary arts, or, indeed, of all knowledge. It must create ideals, strengthen the will, furnish judgment or the ability to distinguish between bad and good, and taste or a fondness for the good. In short, it must train the whole being of the child to wisdom and to altruistic endeavor. A knowledge of the arts, such as reading and writing, bestowed upon one whose mind is untrained, whose ideals are low, and whose aims are vicious, or even upon one who is indifferent to noble ideals, may be a positive injury to society. Hence, the importance of training all the powers of the children toward high ends. This the kindergarten does. Furthermore, the instruction in the formal branches, which constitutes the greater part of the work in most of our elementary schools, is often entirely wasted upon little children. I have seen many instances of cultivated stupidity among children. The work they were required to do was beyond them; it did not appeal to their interests, and did not stimulate their centers of activity; hence they became deadened in feeling and dull in intellectuality; or, if their vitality was too great for this, they expended it in violation of law and order, thus receiving efficient training toward a criminal life. Thus, many of the little children in our schools have received positive injury from the first year or two of their school life. . .

Manual training—We need, in Newark, a carefully prepared manual-training course, coextensive with the grades and open to every child; and I recommend that such a course be established. In the kindergarten and the primary grades the work can very easily be prepared under the regular teachers in connection with the director of drawing. Beginning with the grammar school, special tools are needed, and I recommend that in the basement of each grammar school, or of certain centrally located grammar schools, a shop be fitted up and equipped with the necessary tools for a simple course in manual training for the boys of

all grades. This equipment will be comparatively inexpensive, and only a small additional teaching force will be required to give the instruction. A suitable instructor should be secured soon to lay out the work, and plan for the equipment of the rooms, and advise with regard to necessary teachers for another year. The crowning feature of the training course should be the polytechnic high school. It is obvious that such a school cannot be established and fully equipped until there is a place in which to put it. But a beginning should be made, and I recommend that such a beginning be made at the opening of the next school year; that a room be secured, provided with the necessary tools, and a teacher engaged to give instruction in manual training to such boys in the high school as desire to take a manual-training course. This will be the beginning of a school, and by the time a building can be provided there will be students enough already interested in the work to make a school of reasonable size.

Superintendent W. H. Maxwell, Brooklyn, N. Y. . . . Report for 1896

Parents' Societies—Nothing has been more remarkable in the history of the Brooklyn schools than the apathy with which the schools have been regarded by the great body of the people. There are signs, however, that different views are likely to prevail in the future. One of the most wholesome indications of the time is the formation of two societies—one in the district of No. 1, the other in the district of No. 35—organized to aid and encourage the work of public education in their respective neighborhoods. Such societies, if they are guided by wisdom, may do much to improve the condition of the public schools, and especially to establish those close relations between parent and teacher that are essential to the proper training of the child. Such societies may lead careless parents to see how deep a concern they have in the education of their children. They will bring home to the minds of many who do not now see it the usefulness of art education, of manual training, and of physical culture. They will take care that the school grounds are planted with flowers, and shrubs, and trees; that school

playgrounds are extended; and that the schoolrooms are adorned with suitable pictures. They will secure for the schools collections of plants, shells, minerals, books, magazines, and photographs. They will show their appreciation of good work in the schools; and, when there is criticism to be made, they will make it in so kindly a way as to disarm pugnacity. Above all, they will lead the teacher to see that the school is doing its best work when it is cordially co-operating with other forces for good in the community.

Mayor's committee on baths and public comfort stations, New York, 1896

Baths in Public Schools—The basements of our public schools, which are, in many cases, very little used, are peculiarly fitted for the establishment of spray baths for the school-children. Where the basement is used as a playground, a roof-garden playground might be substituted, and so a double advantage secured. The credit of the initiation of this movement belongs to Göttingen, a city of twenty-one thousand inhabitants, in Hanover, Germany. A great reform had been made in school affairs, giving the most approved methods of heating and ventilation in large, hygienically-constructed buildings. But the thought came, of what avail were all these hygienic arrangements if to these buildings were admitted dirty children, with all kinds of infectious germs? Except during the open bathing time during the summer months, by far the greater portion of the children went unwashed, except for face and hands, and especially was this the case with those above the age of ten. The basements of the schools were empty, there was a good water supply and drainage, all necessary arrangements for heating, and excellent janitors. A consultation with the city architect proved its practicability at an estimated expense of $166.60 for one school. The common council granted $238 for the purpose. The cost, exclusive of building alterations, as asphalting and drainage channels, was: Reservoir, with fittings, $61.88; furnace,$40.46; water pipes, douches, $71.40; tubs and fittings $11.90; total, $185.64.

The baths were ready for use early in 1885. No com-

pulsion was used, and at first only a few children went down, but after two months about seventy-five per cent. took part in the bathing. Each scholar who wishes receives a bath once a fortnight, on one of the four full days during the time school is open. The class which bathes studies some lesson which does not require the presence of the whole class. From six to nine children, according to size, go down at once, and when they have had time to undress, a second set are sent down. The first set step under the douches, two or three under each douche and, when they have bathed, the others are ready to take their places. Thus the douches are kept in use, and the time occupied is comparatively small, a class of fifty-one boys bathing in fifty minutes. Girls and younger children take rather longer. The disturbance of lessons is not so great as was feared. Only a few children are absent at any one time and these can be easily controlled —the boys by the janitor, the girls and younger children by the janitress. "The quickness and willingness to learn after bathing, the education of the sense of cleanliness, the furtherance of the health of the children, are such important and real results of the arrangement," says School Director Personn, "that I cannot but express to the city authorities the wish that, if possible, similar bathing establishments might be introduced into the other public schools." Already it has been found that parents sent cleaner and tidier children to the handsome new school buildings; now their pride made them anxious that neither the janitress nor their fellow-scholars should see ragged or dirty underclothing. There are few families so lost to all better feelings that this has no effect, and in those where drink has driven the sense of honor away, charity must give clothes to the poor children. Up to date about forty cities have followed Göttingen's example, at a cost for water of one-quarter of a cent in Germany, and one-fifth of a cent in Switzerland.

The proposal to introduce spray baths into a Boston public school first came up in the early part of 1896. The estimated cost of fitting up the bath and dressing rooms was $2600. The school board on May 12 referred the matter to the committee on schoolhouses, who reported on September

22 unfavorably. The matter was referred to the committee on hygiene, who reported in favor of the baths on October 13. A long discussion was chiefly devoted to the question of the expediency of the introduction of baths. It was said that the board had been at work trying to put in proper ventilating apparatus in the schools to do away with unclean odors, in one school spending $4500 for this purpose; but they could not get rid of the odors. The order to provide bathing accommodation in the Paul Revere schoolhouse was passed by a vote of eleven to eight. In this city the advisability of providing baths in school basements was mooted in the preliminary report of the sub-committee on public baths and public comfort stations. Mr. C. B. J. Snyder, superintendent of school buildings, has planned to leave room in the basement of a new East Side school for which ground has been condemned, but no further move has been made in the matter.

IX

EDITORIAL

It is an instructive and discouraging commentary on the paper by Dr. Lukens, printed in this REVIEW for June last, that the newspapers recorded the following instances of the degree of Ph. D. being conferred *causa honoris*, in utter defiance of educational sentiment and conviction, at the Commencement season of 1897:

Hamilton College: Archibald C. McLachlan, Jamaica, N. Y.
St. John's College, Fordham: James H. Walsh.
Dartmouth College: Carroll D. Wright, Washington, D. C.
Union College: James E. Benedict, Washington, D. C.
Franklin H. Giddings, Columbia University.

Up to this time no one of the gentlemen named has publicly declined the degree, as did Librarian W. E. Foster of Providence a few years ago; but it is to be hoped that they will hesitate to add it to their names or to make any use of it.

The declaration of principles reported by the committee on resolutions, and unanimously adopted by the National Educational Association in its closing session at Milwaukee, has the merits of brevity and directness. A few essential points were selected for emphasis and commendation, and they are all such as point to an enlarged conception of education and to a growing appreciation of the school and college as social factors in modern life. The full declaration was as follows:

The National Educational Association, representing teachers of every grade and engaged in every form of educational effort, again affirms its unswerving allegiance to the highest ideals of our public educational system.

We believe in the American public school. From kindergarten to university, it stands for sound training, thorough discipline, and good citizen-

ship. While incompetent teaching, inadequate supervision, insufficient material support, or sluggish public opinion may for a time limit its usefulness, they cannot wholly destroy its beneficent and uplifting influence.

We would emphasize particularly, at this time, the duty of the school to the community that it represents. The work of the school is not ended when its responsibilities to the individual pupils who attend it are discharged. It must keep constantly before it the aim, in co-operation with the home and other social forces, of so enriching and directing the public sentiment of the society it serves as to increase respect for law and order and devotion to high ideals and sound principles, as well as to promote efficiency in both public and private life.

We demand that school administration in all departments, including the appointment, promotion, and removal of teachers, and the selection of textbooks, shall be wholly free from political influence and dictation of every sort. We appeal to educated public opinion and to the press of the country to enforce this demand, both in general and in particular instances.

We believe that the public schools are increasing in efficiency as the tenure of teachers is made longer and more secure. An increased tenure of office should go hand in hand with broader professional preparation and higher standards for admission to the work of teaching.

We know that education is more than instruction. Those subjects of study and those school-exercises that develop the pupil's power, refine his taste, and call out his constructive capacity are not "fads," but essential elements of school training. Especially do we ask for closer attention to the hygienic and sanitary conditions of school work, and to that instruction and those influences that give insight into the meaning of the æsthetic and artistic factors in education, and that develop an appreciation of them.

We believe it to be the duty, as well as the opportunity, of the American college, even at the sacrifice of some cherished traditions, to open its doors to the largest number of students possible. To this end it must keep in close touch with the public high school. All efforts to reach this result, and to bring college and high school into intimate relations of mutual dependence, have our cordial approval and sympathy.

We urge more attention to the study of the history and principles of education in colleges and universities, not alone that their graduates may be the better prepared for the work of teaching, but in order that there may be sent out into the community an increasing number of educated citizens who have some knowledge of educational conditions and precedents, and who will thus be able to contribute a prompt and intelligent support to the work of the public school.

We ask the attention of the executive and legislative departments of the government to the valuable work of the Bureau of Education and to the pressing need of adequate appropriations for its support. The salary of the Commissioner is pitifully small, and is beneath the dignity of the office and of this nation. On behalf of the teachers of the country we ask for its increase, and also for the provision of funds to enable educational investigations and experiments to be undertaken and extended.

The Association has contributed to the current discussion of educational problems three reports of the highest importance, prepared after laborious

and long-continued study and investigation; one on secondary education, one on elementary education, and one on the conduct and support of the rural school. We earnestly commend these reports, the work of trained specialists, not only to teachers, but also to legislatures, to members of school boards, to the press, and to intelligent citizens generally. They offer a safe guide for future progress.

The Milwaukee meeting of the National Educational Association called out a very large attendance of the representative teachers of the country. The enrolled membership will probably be found to have exceeded seven thousand, thus ranking the meeting in point of size with that at San Francisco in 1888, and considerably above the very successful meetings held at St. Paul in 1890, Toronto in 1891, and Asbury Park in 1894. The Christian Endeavor Convention, with its extremely low railroad rate to the Pacific coast, undoubtedly attracted many hundreds of teachers who would otherwise have been at Milwaukee. President Skinner's programme presented some very attractive features, and, despite the intense and debilitating heat, the sessions were well attended throughout. Dr. Lyman Abbott's powerful plea for religious training in education, and its enthusiastic reception by the teachers, pointed plainly to the direction in which the best educational thought of the country is tending. With the acceptance of Dr. Abbott's thesis there will arise a new series of problems, administrative and didactic, that the schools must somehow undertake to solve.

The papers on the rural-school problem were sympathetically received, but the exhaustive report of the committee had not been fully enough mastered to make an intelligent and fruitful discussion of its contents possible. Clear-cut, helpful addresses of a practical sort were made by Principal Green of New Jersey and Principal Boone of Michigan; both papers will repay study.

The work of the departments varied a good deal in interest and excellence. The best were the departments of higher and secondary education and the Herbart Society. The decreased attendance at the child-study department seemed to indicate that that important movement is gradually passing from the emotional to the rational stage; which

is a healthy sign. All of the departments were well attended, and a number of papers of more than average value were presented.

The Council spent a good deal of time in discussing itself. Mr. George P. Brown led in an instructive discussion of the Council's doings, or not-doings; and once again the familiar fact that men's convictions depend largely upon their temperaments was amply illustrated in the speeches that followed. In choosing President De Garmo as president for 1898, the Council did the best thing possible for itself. A committee of five, headed by Superintendent Soldan, was appointed to consider and report upon the possible improvement of the Council's work.

The election of Superintendent Greenwood of Kansas City to the presidency of the National Educational Association by a unanimous vote was simply a deferred honor. The post has often been urged upon Mr. Greenwood before, but his modesty has led him to insist upon declining it. But this year the Association would not take "No" for an answer, and no other name than his was mentioned at any time during the meeting. Secretary Shepard and Treasurer McNeill were, of course, re-elected, with cordial expressions of esteem and commendation.

For one circumstance the Milwaukee meeting will long be remembered. It witnessed the first organized effort that has ever been made to introduce political methods into the National Educational Association. For several weeks before the meeting a few chronic malcontents, whose charms and abilities the Association has long overlooked with ill-concealed unanimity, began to organize a movement against an alleged "ring" that was said to be fattening on the emoluments of office, and that somehow or other was trampling underfoot the interests of the plain, everyday teacher. These men were early on the ground at Milwaukee and, as usual, suggested to the early comers

that their names were good ones to appoint or elect to something. But, by accident, doubtless, they appealed either to the wrong persons or to unappreciative ones, and the result of their appeals established no new precedent. Then began the most mysterious whisperings and conferences. The N. E. A. must and should be reformed! Two of the "ring" had been seen sitting together on a bench in the Park on Sunday morning: were they not plotting some diabolical scheme? Of course. Two others had been assigned rooms at the hotel immediately adjoining one another: was not this for the express purpose of conspiring to defeat the will of the people? To be sure. No other explanation could be possible. So the movement grew, feeding on silly rumor and flagrant untruth, until it secured the adhesion of a score or more of the disappointed, the envious, and the disorderly. Unfortunately, a few good and strong men, who ought to have known better and who did know better, incautiously allowed themselves to be drawn into what was a sheer conspiracy, because of the alleged dissatisfaction with the newly nominated directors from their States. No one had the temerity to suggest that the persons chosen were not thoroughly representative men or capable directors, but it appeared that, in selecting his nominating committee, President Skinner had stumbled unconsciously into some petty local quarrels or animosities in two or three States, and so had given offense to one of the factions. This element, however, was too high-minded and too sensible to decieve itself or to be decieved very long, and, after a night's reflection, it withdrew its support from the conspiracy, which straightway fell to pieces.

Led by two or three irresponsible individuals who are not teachers at all, but camp-followers of the army of education, the conspiracy hatched itself in a caucus held at 10 P. M. Never before was anything of that kind ever heard of in the N. E. A., and, judging by the fate this one met with, nothing of the kind will ever be heard of again. Heated speeches were made in denunciation of the "ring," and the names of the most honored and influential educational leaders of the country were treated with contempt by these self-styled

revoutionists. A plan of campaign was outlined. Men were appointed to offer the several resolutions agreed upon and to speak to them, and orders were given to marshal the supporting forces in a given way and at an appointed time. This, it must be confessed, was an unusual and a shameful state of affairs to develop in an educational association.

But *Parturiunt montes, et nascitur ridiculus mus.* On Thursday morning, when officers were to be chosen, this ancient proposition was submitted with melodramatic dignity:

> *Resolved,* That the members of the Committee on Nominations shall hereafter be chosen by the active members from the several States and that each State shall be entitled to one member of said committee. And be it further
>
> *Resolved,* That at the time of choosing the members of the said Nominating Committee the active members of each State shall select or elect one director of this association.

Old members of the Association, such as MacDonald of Kansas, Bright and Cook of Illinois, and Lord of Minnesota, immediately pointed out that this topic had often been discussed; that it had been before a competent committee from 1892 to 1895; and that, after long discussion at Denver, it had been put aside as impracticable because of the changing membership from year to year and because of the fact that it is next to impossible to administer the plan fairly. But the revolutionists wanted to do something. They were particularly anxious to humiliate President Skinner and President-designate Greenwood, if possible. They continually interrupted the speakers, and one of their number broke in upon Principal John W. Cook with a profane and insulting interruption that ought to have caused the offender's immediate expulsion from the Association. After a desultory debate, in which there was more noise than argument, a vote was taken on a motion by Dr. White of Ohio to refer the resolutions to the board of directors; and it was carried. The vote was 150 to 136, showing that the device of "packing" the meeting had nearly succeeded. Even after the vote was announced some of the conspirators were not ashamed to disgrace themselves by insinuating that President Skinner and Secretary Shepard had purposely miscounted.

When the board of directors met it took up the resolutions referred to it, with full knowledge of the proposition submitted at Denver by President A. R. Taylor of Kansas and of the discussions thereon. Dr. White offered a substitute plan which he had arrived at after conference with Messrs. MacDonald and Taylor of Kansas, and others. Dr. White's proposition was approved by the directors without any discussion, and it was reported to the Association the following day, and adopted with but few dissenting votes. These were cast by "revolutionists," who loudly insisted that the "ring" had again outwitted them and perpetuated its power: but for mania of that sort there is no cure.

Dr. White's report and amendments, as adopted, were as follows:

The present plan of appointing a Nominating Committee worked admirably in the early history of the Association, if not to the present, and with very few exceptions the officers have been nominated by the unanimous action of the committee and with general satisfaction. Two years ago, at Denver, an effort was made to introduce another method, and two carefully matured plans were submitted, fully discussed, and finally discarded as impracticable. The motion to refer the resolutions introduced yesterday to the Board of Directors was not made in opposition to the change, but to secure the adoption of the best possible plan under existing conditions. Two features seem essential:

1. The nomination as well as the election of the officers of the Association by the active members in attendance at a given meeting—not by persons who are not present.

2. On the presiding officer of the Association must rest the responsibility of seeing that every State represented in the Association is represented in the Nominating Committee. It will not do to adopt a plan that may result in nominating a committee composed of members from a few States. There must be a head to this association to execute its constitution and by-laws; to see that there is no miscarriage by failure of the active members in the different States to take action.

The plan recommended by the Board of Directors gives the active members of each State in attendance the nomination of its member of the Nominating Committee, but it also makes it the duty of the president, when the active members from any State fail for any reason to select a member of the Nominating Committee, to appoint a member to represent the State.

The resolution is as follows:

It is hereby recommended by the Board of Directors that By-law 1 of the Association be amended to read as follows:

1. At the first session of each annual meeting of the Association there shall be appointed by the president a Committee on Resolutions, and at the third session of such meeting there shall be appointed a Committee on

Nominations, consisting of one member from each State represented, the same to be appointed by the president on the nomination of a majority of the active members in attendance from such State; provided, however, that such appointment shall be made by the president without such nomination when less than three active members from a State are in attendance and also when a majority of the active members in attendance from any one State shall fail to make a nomination. The meeting of active members to nominate members of the Nominating Committee shall be held at 2 P. M. on the second day of the meeting at such place as shall be announced in the general programme.

Even this report was not adopted until Dr. White had been charged with altering the language of the resolution passed by the directors, and when he indignantly and specifically denied this—which it was in no sense necessary for him to do—it was promptly declared that he was not telling the truth.

With this the incident, disagreeable and for a moment or two exciting, ended. Under the guise of fairness and "democracy," it was a malicious and selfish attack on the dignity and power of the office of president of the National Educational Association. It was organized and led by as irresponsible a junta as ever got together. At least one of their number has been for years, and is now, trying in all possible ways to make the N. E. A. a source of financial profit to himself. It is just as well that the incident occurred; for it opened the eyes of many to a small but dangerous element of educational politicians and anarchists that has crept into the Association as it has grown larger. But with Harris, Gove, Lane, Bright, Soldan, MacDonald, Taylor, Kirk, Kiehle, Pearse, Keyes, Brown, Dougherty, Ramsey, White, Preston, Phillips, Cook, Corson, Canfield, Greenwood, Draper, Maxwell, McNeill, Green, Lyte, Harvey, Skinner, Shepard, Jones, Holloway, and the other tried and honored leaders all on one side, the N. E. A. is not likely to allow its reputation or its prestige to suffer, either now or in the near future.

What will undoubtedly happen under the new by-law is this: A few States in which the element of personal ambition or rivalry is strong will for a year or two designate to

the President their members of the nominating committee. In all other respects the present dignified, honorable, and perfectly satisfactory plan will go on without interruption.

The directors chose Superintendent Soldan of St. Louis as a member of the board of trustees for four years, by a vote of forty-one to eight for Superintendent Tarbell of Providence. They listened to numerous appeals for money to aid committees in their work and, after a frank financial statement by Superintendent Lane, referred all these applications to the executive committee and board of trustees, with power. Whether or not any appropriations can be made depends upon the report of Treasurer McNeill as to the financial results of the Milwaukee meeting.

The policy, first insisted upon at Denver and adopted at Buffalo, of absolute frankness and fullness in all financial reports, met with renewed commendation. The reports of the treasurer and of the trustees were submitted to the directors in printed form and fully itemized. The securities in default were so designated, and when the volume of proceedings appears, every member can examine for himself the detailed expenditures of the year and the schedule of investments.

The permanent fund has a nominal value of about $60,000. Its market value is much less than that. It produced last year about $2800 interest. Since the cost of the volume of proceedings was over $6600, salaries $2250, and the incidental expenses of arranging for the meeting over $2000, it is evident that a much larger permanent fund is necessary to insure the permanence of the Association and the continuance of its work. If, at any time, its present railroad arrangements should be terminated, the annual income from membership fees would become very small indeed. These facts are entirely overlooked by those inexperienced teachers and editors who are continually calling for the expenditure of the permanent fund.

It may safely be asserted that no organization in existence excels the N. E. A. in efficiency, in businesslike administration, and in the unselfish devotion of its executive officers.

The leaders of American education and the great body of the teachers know this, and therefore demagogues and agitators may just as well give up their hopeless struggle to discredit it.

The task of building universities in this country, whether on private foundations or under State control, is difficult enough at best; but it is made almost impossible by the intense partisanship of a large majority of the American people, by our unwillingness to listen to expert advice or to follow expert guidance in any form, and by the genuine intolerance of influential and responsible elements in the community. *Lehrfreiheit* is a university's dearest possession, and without it no university can live. To force instruction into certain channels, determined by preconceived notions on theological, political, or other subjects, is to develop a school of a sect or a party,.but not a university.

If our opinions are true, they will bear the test of opposition and debate; if they are false, the sooner we know it and abandon them the better. *Lehrfreiheit* is the surest method of putting them to the test.

The history of education records the progress of the long struggle for *Lehrfreiheit.* Abelard, Roger Bacon, Galileo, Bruno, and Christian Wolf were among its martyrs. As lines of economic difference become deeper and sharper in the modern democracies, there are signs that *Lehrfreiheit* is coming to be viewed with distrust, and that it must fight again for its existence. Philosophical differences no longer, as in the Middle Ages, attract widespread attention; philosophers are therefore allowed to go their ways in peace and to teach the truth as they see it. Philological differences are unexciting and remote from popular interest: philologists, therefore, are not interfered with. Devotees of natural science are, as a rule, the most intolerant of all university teachers, especially toward differences of opinion within their own sphere: yet, almost without exception, natural scientists are not hampered. The historian and the economist are the men whom modern American conditions put in jeopardy. When it is seriously

proclaimed that the man who drives spikes on a railway knows more of finance than the trained specialist, *Lehrfreiheit* is in danger of embarrassment, to say the least. When the "plain people" know more about political history and interpret it more wisely than those who give their lives to its study, then universities are not only unnecessary but impossible.

These reflections are suggested by reports that have recently come from the States of Washington, Missouri, Kansas, West Virginia, and Texas as to the relations of the dominant political parties therein to the State educational institutions, and by the still more extraordinary incidents that led up to the resignation of President Andrews from Brown University. This institution—which is not yet a university at all, but, like a dozen other American colleges of high standing, a college reaching out university-wards—was founded in 1764 in the colony made memorable by Roger Williams and the gospel of religious toleration. Yet the governing board of this institution substantially asked President Andrews either to give up his opinions on a political and economic question of present importance and interest, or to suppress the expression of those views. The reason assigned was that, otherwise, the university would lose financial support. The idea that no "university" was worth supporting in which freedom of opinion on such a subject was not permitted, apparently never occurred to them at all. The highest regard was expressed for President Andrews as a man, and his services to Brown were emphasized in the very letter that conveyed the intimation referred to. By commending President Andrews's services as an educational administrator and by extolling him as a man, the trustees put themselves hopelessly and irrevocably in the wrong. They narrowed the issue to one of *Lehrfreiheit* and precluded themselves from asserting that President Andrews was a man of unsound judgment, flighty views, and unstable opinions, and so a source of weakness to the University. Whether true or not, such a charge might easily be a matter on which opinions could honestly differ.

The gentlemen who wrote to President Andrews on the

matter were not politicians and schemers, but men of the highest social, professional, and business standing. This gives a seriousness to the incident that can hardly be overestimated. Put bluntly, it signifies that Rhode Island and Providence will not support an educational institution in which an officer of prominence holds views antagonistic to their own on an economic question that is under present discussion. It will not do for these gentlemen to say that President Andrews's views are dishonest and immoral. That is one of the very points at issue, and the analogies by which such a statement would be supported are grossly misleading. Freedom of opinion and expression on this subject, at least, will not be permitted at Brown University.

This being the case, President Andrews took the only course open to him when he wrote to the governing board that he should find himself "unable to meet the wishes of the corporation, as explained by the special committee recently appointed to confer with me on the interests of the university, without surrendering that reasonable liberty of utterance which my predecessors, my faculty colleagues, and myself have hitherto enjoyed, and in the absence of which the most ample endowment for an educational institution would have but little worth, I respectfully resign the Presidency of the university, and also my professorship therein."

What a comment this occurrence is on the project for a national university at Washington, that is still kept alive by earnest but, we believe, misguided men!

The newspapers at once began to handle the Andrews incident with great freedom, not to say recklessness. It was "news," and had to be exploited. But if any single editorial writer, except the author of the *Outlook's* leader on the subject, had even the dimmest idea of what the resignation meant to our educational and scientific development, or what sort of an omen it was for the future, his article failed to attract our attention. The great metropolitan journals such as the New York *Tribune, Times, Sun, Evening Post,* and *Mail and Express,* simply reflected in their dis-

cussions their own views and those of their readers on President Andrews's economic opinions. When they mentioned the educational issue at all, it was only to hide behind the paltry subterfuge that "the trustees doubtless knew what was best for the institution." *Quis custodiet ipsos custodes?*

The value of the maxim *Ne sutor ultra crepidam* is again illustrated by the recent venture of Professor Peck of Columbia—scholar, critic, and man of letters—into the field of education. A dull and jejune series of papers on modern education in the *Cosmopolitan* magazine has suddenly been made interesting and readable by his brilliant pen. Professor Peck's argument and conclusions are these:

For thirty years American education has been almost wholly influenced by German teaching and example. Together with some good results, at least one bad result has followed. The cult of the formula has taken root among us. Education, it is believed, can do anything and everyone is capable of being educated. All is reduced to rule. Individual idiosyncrasy of the learner does not count. Similarly, it is held that all subjects can and should be taught. The curriculum has become a common dumping-ground. Further, education means ambition; ambition means discontent; discontent is dangerous. Hence, universal education is dangerous. All real human achievements have been accomplished by aristocracies. An aristocracy of educated men is desirable, not free and compulsory education for all.

It is not often that the *Zeitgeist* has the pleasure and the profit of accepting a challenge so frank and so outspoken as this. Many influential men hold these opinions and express them in private; a vast majority of English university men, and no small proportion of professors in Eastern American colleges, believe in them and guide their practice by them: very rarely is one of their number bold enough and honest enough to speak his full mind as Professor Peck does. He has set a good example, and it is to be hoped that it will be followed.

By way of answer it might be said, in the first place, that

there is no use in combating Professor Peck's view, because the whole history of our time is a refutation of it. But Professor Peck would not admit that, and, besides, the answer seems like begging the question. It is wiser to look the facts in the face. What are the facts?

First, that American education, higher and lower alike, is surprisingly free from German influence of any kind, sort, or description. At a few points in university method and at a few points of general educational philosophy, we have been touched by German influence, but in each case only the good results noted by Professor Peck have followed. The American university and the American public school have only followed German models and suggestions to adapt and improve upon them. There is no instance of their slavish adherence to any foreign type, German or other. No single institution is so purely American, in both the good and the bad senses of the word, as our educational system.

Nor is there any "cult of the formula" or overlooking of "individual idiosyncrasy of the learner" in modern education. Precisely the opposite is true. This is the case in Germany itself, and conspicuously so in the United States. No responsible educational leader believes in "formulas" or inculcates them. The discovery and development of individuality, not its suppression, is the watchword of all modern teaching. This begins in the kindergarten and reaches its climax in the university. It is the most prominent characteristic of the modern school, and the burden of all contemporary educational discussions. It is surprising that Professor Peck could have looked for it without finding it everywhere.

When Professor Peck touches higher education he is on surer ground, and states some unwelcome truths with brutal frankness. That the so-called universities in the United States graduate some examples of the "sublimated type of tinker"—and not so very much sublimated, at that—together with well-trained scholars, is undeniably true. But the remedy is not, as Professor Peck implies, in shutting down on the modern subjects of study; it is to be found rather in insisting that the broad basis of a liberal education

be laid before the study of the applied sciences is entered upon. Then the "tinker," sublimated or not, will give way to the trained and skilled practical intelligence that is so much needed and that is so thoroughly in accord with the ideals of modern civilization. It must be borne in mind that education is no longer the firing of blank cartridges in honor of a past, however great; it is shooting with powder and ball straight into the face of ignorance and incompetency as they manifest themselves to-day.

The contention that universal education must be abandoned because of its tendency to rouse ambition, and so to stimulate discontent, cannot be taken seriously. But suppose it does: What is the alternative? Obviously, the eventual overthrow and, perhaps, the massacre of the educated few by the ignorant and illiterate mob, and the consequent destruction of our civilization. Discontent is not necessarily a bad thing: the word may have several meanings. In one sense, at least, discontent has been, and is, the source of all progress of every kind. We want more of it: discontent with ignorance, with vice, with dirty streets and corrupt policemen; discontent with venal politicians and dishonest men of affairs; discontent with fools, knaves, and charlatans generally. That is the sort of discontent that education, framed on the best modern lines, will produce. Of course, there are educational quacks and mountebanks, and here in America we have more than out full share of them: yet they are but flies on the wheel. Professor Peck's sense of humor should prevent him from taking them too seriously.

Finally, a word about aristocracies. They will always exist and they always ought to exist. Brains will always be superior to muddle-headedness and industry to sloth; but the modern aristocracy is democratic in the sense that there are no class barriers to be surmounted before it can be entered. Neither birth, favoritism, nor wealth can secure exclusive privileges to-day and keep them for any length of time. Modern education seeks to recruit the modern aristocracy from the best and widest possible sources. By discovering and developing individual capacity and talent, it

offers to everyone an equal chance to demonstrate his capacity to lead. Leadership is as definite a fact in human life as color or form. It must be reckoned with. The democratically recruited aristocracy is on the lookout for it, and modern education is constantly developing it.

Joseph J. Little, printer, ex-Tammany congressman; Robert Maclay, banker, aspirant for the mayoralty; and A. P. Ketchum, lawyer, Republican politician, are still members of the New York Board of Education, and serve as perpetual monuments of the wrongheadedness and obscurantism of the old Jasper majority, of which they were a part. They recently expressed "grave legal doubts" as to the justifiableness of the appointments of Messrs. Buchanan, Wight, and Goodwin to the new high-school principalships, and, as members of the finance committee, "held up" the salaries of these gentlemen until an emphatic opinion from the corporation counsel put an end to their obstructive tactics. Their next step was to object to State Agent Edson of Massachusetts, as a member of the Board of Superintendents, because he was not a resident of New York. The fact that by electing him they could increase the reputable and useful residents of New York by at least one, did not occur to them A third evidence of their desire to have inefficiency in the schools at any cost was furnished when objection was made to confirming the appointment, as high-school teachers, of those men and women who had passed the best competitive examinations, because, forsooth, the accident of birth or circumstance had not brought some of them to Manhattan Island earlier. The childishness of this proceeding led Commissioner Speyer to urge, with a sarcasm that we fear was lost upon Messrs. Little, Maclay, and Ketchum, that only such text-books be used as were written by New Yorkers and published by New York firms.

The withdrawal of President Hervey from the New York Teachers College is the most serious blow that that institution could receive, and that at a very critical time in its

history. During the seven years of his incumbency President Hervey has labored, with unusual ability and single-minded devotion, to solve the problem of the professional training of teachers on the highest possible plane. The alliance between the Teachers College and Columbia University was, of course, of some assistance to him, but for a variety of reasons it has not been as effective as it might have been. This, together with the fact that between fifty thousand and sixty thousand dollars must be raised every year to pay the running expenses of the College, has been more embarrassing than appears upon the surface. Yet President Hervey had succeeded in accomplishing more toward the solution of this problem than any of his contemporaries, and in ten years, with the resources of Columbia properly utilized, he would doubtless have surmounted all his difficulties and obstacles. He has won the confidence and respect of the educational leaders of the country, and he will be cordially welcomed to any portion of the educational field in which he may care to work.

As is well known, the EDUCATIONAL REVIEW very rarely prints any article that has been published elsewhere. Mr. Wetmore's straightforward discussion of the incompetency of the Boston School Committee is made an exception, because it is of national interest. It describes what is happening everywhere, when men and women, however intelligent, endeavor, as members of school boards, to do work and to solve problems that require special training and experience. Boston appears to have reached a stage where the institution of reforms similar to those just accomplished in New York seems desirable. Incidentally, Mr. Wetmore throws light on the necessary workings of that marvelous local-committee system which some communities still cling to with passionate devotion.

The Conference on uniform college entrance requirements in English met in New York city on May 31 last. All the delegates were present, and a considerable part of the preliminary business before the Conference was satisfactorily

dispatched. Several objectionable books were dropped from the prescribed lists, and the lists for 1901 and 1902 were made to resemble as closely as possible those for 1900, thereby meeting the widespread demand of schools and boards of education for greater permanency. Necessary additions were made to the requirements in the shape of three clauses: (1) strongly advising schools to offer a course in rhetoric; (2) permitting colleges to examine candidates in the essentials of English grammar; and (3) on "the leading facts in those periods of English literary history to which the prescribed works belong." The main business of the Conference, though discussed, was deferred until the adjourned meeting in Philadelphia at Christmas, and it is doubtful whether it can even be completed at that time. What it has to do is (1) to pass on a much larger list of books recommended for voluntary reading, and (2) what is of infinitely more importance, to offer a perfectly definite statement of the course of study to be followed, and the general ideals to be kept in mind in the fulfillment of the Conference's somewhat vague requirements. Here marked differences of opinion and practice must necessarily rise between sections where admission by certificate is common and those where all candidates must necessarily be examined in the old-fashioned way, on the basis of a rigid set of printed questions. It is to be hoped, however, that some scheme may be found that will not hinder the West in its free use of the certificate system, which has all the advantages on its side in point of theory and which, intelligently administered, works admirably in practice, and will yet leave the East free to use the practical machinery, already well developed, for the older system, until it is ready to abandon it forever. Whatever the result of the Conference's deliberations be it must be one that will meet the real needs of the country at large, and it must be of such a sort that it can be agreed to in every particular by the similar committee appointed by the National Educational Association.

The publication by the National Educational Association of a carefully prepared index-volume to all the Association's

publications puts this valuable series of volumes within the reach of students of education and of readers in libraries. An immense amount of valuable material is contained in their pages, but, until a scientifically constructed index was prepared search for any particular topic was like the traditional hunt for a needle in a haystack. Every college library, every normal school, and every superintendent's office should contain a full set of these volumes for reference and study. This index makes them immediately available. Moreover, libraries, colleges, and schools may now join the N. E. A. as active members and so become possessors of all future volumes at the nominal price of two dollars a year, the membership fee. Columbia University has recently taken advantage of this provision, and the way is open for other schools and colleges to do the same.

The Report of the Committee on Rural Schools can be had in any quantity desired by writing to Secretary Irwin Shepard, Winona, Minn. In accordance with the vote of the directors of the N. E. A. the report will be sold as nearly as possible at cost, as follows: single copies by mail, 25 cents; packages of 10 copies, express prepaid, at 20 cents each; 50 copies or more, f. o. b., Chicago, 15 cents each.

The joint Committee on uniform college entrance requirements was enlarged and strengthened at Milwaukee by the addition of Principal Ray Greene Huling, of the English High School, Cambridge, Mass.; George B. Aiton, State Supervisor of High Schools, Minnesota; Professor Henry B. Fine, Princeton University; and Professor Edmund J. James, University of Chicago.

Professor C. C. Van Liew leaves the Illinois Normal School for the State Normal School at San Jose, Cal., and Professor L. H. Galbreath leaves the same institution to succeed Professor M. V. O'Shea in the Teachers College of the University of Buffalo. Professor O'Shea, in turn, leaves Buffalo for the University of Wisconsin.